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ABSTRACT

This anthology consists of 7 presentations given by invited speakers and 15 essays that show how crafts form both a theoretical and practical discourse that deals with the most varied individual, cultural, and behavioral phenomena. They involve the concept of sloyd, derived from a Swedish word, an umbrella term for making or crafting things by hand. The presentations are as follows: "A Qualitative Approach to Research on Artistic Phenomena" (Elliot W. Eisner); "Conservative Craft and Progressive Education" (Sven G. Hartman), English abstract and Swedish text; "Multiteoretisk Metodologi i slojdforskning" (Juhani Peltonen); "Research on Arts and Crafts as Cultural Phenomena" (Elliot W. Eisner); "Som Slojd en del av hallbar utveckling" (Ulla Suojanen); "The Psychology of Image Formation: Subject and Object Dimensions" (Andrei Podolskij); and "Kunskap Genom Handen" (Arne Klingborg). The essays are as follows: "The Image of Becoming: Questions of Time, Identity, and Education in Textile, Clothing, and Craft Design" (Minna Uotila); "A Look at the 'Glass Case'" (Harri Kalha); "Textile Art in Perspective: Looking at Textile Art as a Historical Project" (Leena Svinhufvud); "Products in Their Ideological Context in Professional Evaluation" (Mirja Kalviainen); "Development of the Reference Frame in Crafts Science" (Iija Pietikainen); "Revealing Design Thinking through Protocol Data" (Pirita Seitamaa-Hakkarainen); "Grounded Theory--Two Different Ways of Coding" (Pirjo Keso); "To Speak of the Unspoken: Tacit Knowledge and Participation in Its Interpretation" (Ritva Koskennurmi-Sivonen); "Some Observations on the Anttila Paradigm of Designing and Making-Up" (Leena K. Kaukinen); "Ansats til en slojdpaedagogik" (Mikkel Holmback); "Every Time Is Time for Craft" (Seija Kojonkoski-Rannali); "Vagen till och genom ett konstnarligt utvecklingsarbete. 'Slojd och bygga rum. Den skapande fantasin leken och rummet'" (Goran Ekman); "Integrating Technology into Sloyd in the Early Years" (Ari Alamaki); "The Development of Craft Teaching in the

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Education of Class Teachers" (Jaana Lepisto); and "Ramaterialets betydelse i den framtida slojden" (Torbjorn Lindstrom). (YLB)

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PRODUKT, FENOMEN, UPPLEVELSE

Proceedings of a Nordic Symposium
Helsinki, November 7 - 9. 1996

Eds.
Pirita Seitamaa-Hakkarainen
Minna Uotila

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in Craft and Design

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1997

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Preface

The essays in this anthology are drawn from the papers given at the symposium entitled Product, fenomen, upplevelse, held at the University of Helsinki, Section of Textiles, Clothing, and Craft Design, on November 7th -9th, 1996. Swedish and English were the official symposium languages.

The present volume is published in the new optional Nordic publishing series, TECHNE SERIE, which contains research reports, monographs, congress reports, and anthologies. The series aims to reflect research in Sloyd (or Crafts) Education and Crafts Science and the recent developments of these disiplines in Finland, in Scandinavian areas, and thoroughout the world.

The articles have been arranged according to the order of presentation in which they were given. The first part of the anthology consists of presentations given by invited speakers; Professor Elliot W. Eisner, Professor Sven G. Hartman, Professor Andrei Podolskij, Professor Ulla Suojanen, Professor Juhani Peltonen and artist Arne Klingborg.

In his two lectures Professor Eisner, an internationally highly regarded researcher of art education, works with issues of cognitive consequences, concerning both the artistic and cultural perspectives on arts and crafts.

The lectures published in this anthology represents a transcript from an oral presentation that was not itself written. The lecture of Professor Sven G. Hartman deals with the role of manual work, especially educational sloyd, in the Swedish compulsory school and in the progressive education movement during the period 1880 - 1920. Professor Andrei Podolskij studies the psychology of image formation, focusing on the subjective and objective variables. Professor Juhani Peltonen examines multi-theoretical methodology in Sloyd (or Crafts) Education. In closing, the main section was completed by Professor Ulla Suojanen's lecture on ecological aspects of crafts.

Altogether the anthology endeavours to show how crafts form both a theoretical and practical discourse which deals with the most varied individual, cultural and behavioral phenomena. The research in Sloyd (or Crafts) Education and Craft Science has gained a firm scientific basis. The power of crafts research consists in the multiplicity of its concepts and methods which makes them adaptable to different educational situations and epistemological conditions. The essays reflect this fact. Therefore we believe that this anthology is well-suited to the TECHNE SERIE.

We appreciate Professor Ulla Suojanen, of the University of Helsinki, for her initiating this succesful symposium. We also wish to thank secretary Riitta Vuorinen for making the necessary practical arrangements for the symposium and Maria Salonen for producing the transcription of Professor

Eisner's lectures. Professor Elliot W. Eisner was the guest of Professor Kari Raivio, the President of Helsinki University, whom we wish to thank for the opportunity to organize an inspiring symposium with Professor Elliot W. Eisner as a keynote speaker. Finally, without support from NorFA - Nordisk Forskerutdanningsakademi, NordFo - Nordic Forum for Research and Development in Craft and Design, and Academy of Finland this symposium and the anthology would not have been possible.

Helsinki, April 29, 1997

Pirita Seitamaa-Hakkarainen Minna Uotila

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Invited Speakers

Elliot W. Eisner
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Transcripted Maria Salonen

A Qualitative Approach to Research on Artistic Phenomena

Distinctions between Art and Craft

Craft can be seen as a creation of objects that have some utility, some practical usefulness. Art on the other hand can be seen as objects of contemplation, that provide a certain level of experience, valuable in its own right without any further justification or utility. This distinction between objects of use and objects of contemplation I do not find as useful.

Craft are multiples that are created for commercial purposes and the arts are unique objects. I do not find this distinction particularly useful. Many crafts are done in multiples, but some works that are being thought of as unique, like paintings - are also essentially multiples, made for commercial purposes. Even works that are individual are made in a process of repetition - and for providing an income, e.g. printmaking.

The third distinction that some people make is that the arts, especially the fine arts, are somehow more sophisticated than the crafts, which are technically, aesthetically, imaginatively and expressively something less. I don't find that distinction useful either. It has its origins in the history - that is how the distinction has been made. It has nothing to do with the conceptual differences between the two (except for matters of political organization and communication).

In Collingwood's terms in craft an individual has a repertoire of skills and knows what the end view is supposed to be, what the work is supposed to look like at the end. The process of craft is the process of applying these skills to achieve that particular end. That end might have some aesthetic qualities, but it is a predictable process. Art in Collingwood's terms is engaging in a process where you can start out with an idea, but in the process new ideas emerge which were not anticipated and which you then pursue. In the context of art, in Collingwood's terms, as contrasted with crafts, there is a creative dimension that is characterized by the discovery of new possibilities in the course of the work itself. There is some advancement, openness, you are not constrained by the aims or the image that initiated the work. There is some degree of discovery, invention or creativity in the process of making it.

That conception also has its difficulties. In Collingwood's words the determining element is located in the kind of process that individuals are engaged in the act of construction. To know this really requires a psychological analysis of the maker and whether or not it is useful to make this distinction remains to be seen.

There are artists that do paintings that for most people would be representative examples of works of art, but if you take a look at what they are doing, in fact they are applying known skills to known ends and that would fit a craft conception of Collingwood's, even if in terms of the general culture it looks like an art product rather than a craft product.

Processes and interests that initiate the process of craft making

How are the parameters of the process defined? What happens when the individual wants to define the conceptual ideas of a project. By tradition, by awareness of similar objects? To what extent are new ideas stimulated so that the work takes on new forms that it didn't have before? Where are the constraints and limits and where are the possibilities? Where are the stereotypical expectations and where are the innovations? How is the work itself pursued in the process? In the process of making the work does the maker discard past plans by keeping himself open to the work? Is there anything like surrendering, giving in, allowing the work to give a lead to a new direction?

In the US there is a conceptual tradition of thinking about craft work, a painting, a sculpture, ceramics as work that is done by hand only, manually. That conception undermines the idea that there is much in the way of cognitive thinking taking place. It undermines the idea that there is reflection, problem solving, there are sophisticated methods involved in craft or art. I think from an educational point of view this perspective is a disaster for both the arts and the crafts.

The ways in which technical processes are invented to make certain things possible is something that needs to be studied carefully. I have a hunch that if this is done well the picture that will emerge in arts and crafts will present a picture of cognition that is among the most sophisticated forms of thinking rather than the least sophisticated forms of thinking that people engage in.

In articulation, in careful description of the processes of making these kinds of work will provide a picture of cognition that is important for people making educational policy to understand, because these works do not by themselves speak for themselves. There is one explanation, which is rather dominant - a garbage can explanation - called TALENT: "They can do it because they are talented!" If you take that explanation seriously, then your problem as an educator is one of selection, not of education. What you have to do is to find those who have it and those are the people you work with.

My attention to the question of process has to do with a development of a very detailed picture of what is going on between the individual and the work.

Criteria to monitor and appraise the process of the work

What is it that satisfies? What is it that causes dissatisfaction? And what does the description of such process mean for understanding the course of cognition in the making of craft?

There is a monitoring process that is involved, obviously, in doing any kind of work in crafts or art, music or dance, literature or poetry or any of the arts. The process of representation, a process of taking an image of something that one wants to make requires a process of transformation from something which is in the mind's eye, in the imagination. The central term of imagination is image. So somebody develops an image, has an idea. It may be a visual idea, it could be a choreographic idea, it could be a musical idea. But there is a process of transforming that material. The conversion of a material into a medium is a conversion of making a material serve the purposes of the idea. A material is not the same as the medium. A material is what you work with, a medium is a material that mediates an idea.

So when your students are working with a material, the problem technically and the problem conceptionally is a transformation of that material so that it becomes a medium. And when it becomes a medium, the transformation is from the inner to the outer. There is a public representation of something that otherwise would be very difficult to hold on to. Nothing is more transitory, more slippery to hold on to than an idea. Ideas come and go. How many great ideas have you had before you got up in the morning? When you get to the university, you have forgotten them. What you are able to do is to fix an idea into a material which mediates it and once you do that, you can work on it, you can refine it, you can edit it, you can improve it and strengthen it, you can address problems.

To be able to edit is to modify the work. What is involved in the monitoring process? To what extent do you as a maker need to be engaged in an emotional connection with what you are paying attention to in order to monitor what is happening? How does a crafts person know when they have it right? How do they know when they have it wrong? There is no formula, there is no recipe to do this, unless it is simply a technical undertaking. To the extent that sensibility is involved in being in touch with what you are doing, there may also be an emotional relationship between the work and the maker. That process is worthy of study.

Feedback from others

What does the maker do and what does the maker learn from such feedback? What happens when the group's norms conflict with the norms of the crafts person?

I've said that the first obligation of the crafts person is to make something the public does not like. I call it 'pushing at the edges'. There is this question of norms and how conflicts in norms get resolved by an individual. What kind of a setting invites youngsters to push into new forms?

When somebody is working with something, the work gets modulated through what is happening to the individual in the process of making it. So this question of conflicts and norms and the possibility of pursuing images, the realization of images in the making of a craft, is not simply a matter of reproducing old solutions to old problems, but of finding new possibilities, even at the risk of making things that do not get a positive response, initially. And that takes courage. It is easier to do what is accepted. From an educational point of view for an individual who is not going to be a professional crafts person, this is something one might want to pursue.

What modes of cognition come to play in craft making?

To what extent are these modes of cognition common? Do the thinking processes of highly successful crafts persons differ from those who are less successful? Are there differences in these processes?

Looking at processes between experts and novices in work is an important dimension to pay attention to. Other dimensions that can be attended to are: the question of exploitation of accidents and the pursuit of flexible purposing. "Art loves chance". It gives a private place to surprise and it gives also a place for risk. And when you have risk, you also have threat. And when you have threat, you have engagement and you are open to surprises.

The idea of finding in the process of working different opportunities, which change your direction, because they are so promising that you do something that you had not intended to do. The extent to which that process is an ongoing part may be something that successful crafts people do.

If you look at the work of a crafts person and it is essentially the same for year after year after year, you say there is no growth. What does it mean to grow? It means to find things that you did not know before, things that keep you moving along. How is accident exploited? Is there flexible purposing in the course of the work?

The question is about whether the crafts person believes risks were taken and, if so, what kinds? And what do such risks mean for that individual emotionally? Can individuals describe to you their satisfactions or their frustrations, where they began to turn away and turn on to new possibilities in the course of making the work? To try to get in to the emotional meaning of the work itself. This is all intended to create collectively a much more compprehensive picture of what is involved in asking children, adolescents and adults to be engaged in this work.

To have a conception which gets transformed into a medium and made permanent, that image is, in fact, too simple. Because the issue is not just a matter of the externalization of a conception. It is not a monologue, it is a dialogue between the individual and the work, a conversation. The description of that conversation, what the work is telling an individual and what the individual is telling the work is very important.

The cultural level - the connection between the work and the public

How do works of craft impact, how are they received by the public? What is it that the public response to in looking at a craft work? Where do their satisfactions come from? How does the work fit their expectations? What do they have to say about what it is they are seeing? What is the role of tradition, in what they bring in the way of expectations to their perception of the work that is made?

The connection between the work and the public becomes an important dimension. Do people with different cultural backgrounds and different social classes response differently? What conceptions of artistic virtue do they bring to the work? What do they regard as good? Why do they think it is good in relation to a particular work?

Who are we dealing with in our teaching is important in terms of any educational program that is going to be mounted in the schools. I understand that one of the aims of crafts education is to develop more sophisticated consumers of craft. Knowing where the public is with respect of their taste, their values, their expectations is important in that sense. You get some sense of the cultural context in which the work is.

What kind of transformations occur in the form of qualities of the genre of the work over time? Can we track and explain the changes that have occurred? If you were to take a look at the social evolution of craft forms in the culture, what accounts for the changes? Can you get a picture of the relationship between the social context and the forms that are accepted.

For example, if you found that the products that are sold in ARTEK in Finland, are sold to 5 % of the population, who have the upper 3 % of education, you might ask why? It has to do with trying to locate the evolution of work and the connection between people and their taste by class over time, to get some sense of the social dynamics that affect the place and form and quality of the crafts within any culture, and in this culture. So do people with different backgrounds and different social classes response differently and what conceptions of artistic virtue do they bring to the work? It may be that schools may not be able to overcome the impact of the aesthetic culture of the home and neighborhood in which people grow up. It is something to think about. In other words can schools change, can educational program change the ways in which students see the work, experience and value the work?

There is distinction between judgment and preference. I used to have an art teacher who made a comment to me one day: "Great paintings require great audiences" and you can transform that idea into crafts. You can ask your students what it is they see and what is it they are able to say? Do students who come out of art programs see more and do they say more? Do they have grounds for their preferences? There is a very important distinction between making a judgment and making a preference. If you ask for the reason for their judgment and they say: "because I like it", that is a preference masquerading as a judgment.

Educationally it is important to find out what individuals bring to their perception of craft work that makes their experience of the work more sophisticated. In the best of work the work itself can impact the way in which people think and see the world. In a very deep sense, the products that we make, when they are really well done, are primary sources of education. We begin to see things we didn't see before.

When do children and adolescents understand the connection between the form the work takes and the philosophy behind it? The Bauhaus work, for example, has particular features because there is a particular philosophy behind that work. It is about a certain kind of rationality that is rooted both in Greek philosophy and in the Enlightment. A very different philosophy is reflected when looking at a tea bowl from Japan, where one is concerned with nature. Someone once said "A bowl should not look like it was made, it should look like it was born". So what you get expressed in the work is an idea that the work itself manifests and displays. Works can affect the way in which we see things.

How does the form and content of a work fit in with the life style and values of different social groups? There may very well be a fitness between the kind of work that they like and their own style of life. It is something to look at. If you were to identify populations: rural, urban, upper, middle, lower class, people with different ethnic backgrounds and who have a particular style of life, people in Lapland, people who live in Helsinki, are there systematic differences in what they respond to craft work and why do these differences exist, if in fact they do?

What processes of socialization and education appear to influence taste and understanding of what they look at? Educationally speaking what would be needed in schools by the way of curriculum and teaching to expand the ways in which a work of craft is viewed and understood? What kinds of programs would expand students' understanding of the way in which they see and understand crafts work?

1) getting youngsters involved in making crafts and developing their technical skills. This is probably now emphasized in Scandinavian schools.

2) getting children to become critical consumers of what has been produced in the craft world and in their own work. They need to be helped to learn to see what it is that they and other people have made. That reguires another kind of pedagogy, one that is rooted in criticism, art criticism, craft criticism, the ability to see and describe and interpret these non-verbal forms. That needs to be attended to in the curriculum

consciously. It reguires attention to the education of vision and not only the education of the production of these objects.

3) the study of the connection between the work and the culture. If one is looking at a painting by Monet or Renoir, they are helped to understand the social and historical context which gave rise to that piece of art. If you are interested in formal analysis, you can take anything, a garbage can, a tree, and do a formal analysis of it: line, color, shape, texture and the rest of it. It's not the same with a painting. A painting is a human product, driven by intention, participating in a tradition, having a particular character with an intended, some kind of meaning that can be constructed from it or deconstructed from it. So understanding the context becomes an important frame of reference in being able to look at and experience the work. What is the analogue in the world of craft?

4) aesthetics as a philosophy. Is there a legitimate, useful conceptual distinction between art and craft would be a question that can only be answered from an aesthetic perspective. You have to deal philosophically with that idea, it's not just a historical question. Questions about goodness, about achievement, what is the basis for saying that something is better than something else, if we do say it? If we say that everything is of equal worth, that itself is a value judgment that needs justification.

Conclusions

I have tried to raise a variety of questions, some of which focus on the processes that crafts people engage in the course of creating crafts. If we study those processes, we are likely to have a much more complex conception of the kind of thinking and feeling and doing that's involved in crafts than we have at the moment. In the field of education it is very important to have that both, in preparing teachers, but also in informing educational policy makers and politicians about what the crafts are about. It has to do with the education of vision, with the development of mind, with the opportunity for people to put their own signature on their own work, to get in touch with what is often been taken away from them. These processes need to be studied, they need to be described, they need to be explained and the field itself needs to have a foundation of this kind on which to build. So that the practice of crafts does not rest solely on matters of tradition and hope. Not that tradition is unimportant, it is simply not adequate.

The connection between craft work and the culture is the interface that also needs attention. It's not only what the individual crafts person is doing with his or her materials, but also how it is received and how people learn to read it and accept it or reject it, and how people can be helped to deal with it in a much more sophisticated way. What I have been trying to get across are these two different dimensions, the personal and the cultural sides. The personal side on the process of making and the cultural side in the process of reacting and influencing what crafts people do and the way in which the work of craft influences the shape of the culture.

Sven G. Hartman

Linköping University

Department of Education and Psychology

Conservative craft and progressive education

Abstract

This lecture deals with the role of manual work, especially educational sloyd, in the Swedish compulsory school and in the progressive education movement during the period 1880 - 1920. The Swedish educational sloyd was developed by Otto Salomon at the Sloyd Teacher College at Nääs. It became internationally well-known in the end of nineteenth century. The educational sloyd had both conservative and progressive dimensions. It is suggested that the conservative and progressive dimensions were differently stressed on different levels and in different educational contexts. On the rhetoric level the progressive dimensions were on the agenda. On the practice level the conservative dimensions of the educational sloyd are supposed to have dominated. The reception of educational sloyd in the progressive education movement was probably influenced by this.

Keywords: Educational sloyd, history of education, implementation, manual work, creativity, Otto Salomon, John Dewey.

Sven G. Hartman

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Konservativt hantverk och progressiv pedagogik

En filosofiprofessor är kanske inte den man först förknippar med slöjd och slöjdutveckling. Men den amerikanske pragmatismens främste företrädare John Dewey utgör i så fall ett undantag. I slutet av 1800-talet kommenterade han den samtida skolutvecklingen på följande vis:

> *"When we turn to the school, we find that the most striking tendencies at the present is toward the introduction of so-called manual training, shop work, and the household arts - sewing and cooking."*
>
> John Dewey (1899)

Detta skrevs under den progressiva pedagogikens genombrottsår. Folkskolesystemet hade blivit ordentligt etablerat i västvärlden. Uppbyggnadsperioden hade följts av rutinisering och förstelning. Det var dags för förnyelse och medvetna försök att med hjälp av skolan utveckla ett nytt samhälle i stället för att återskapa det gamla.

I Sverige och Nordeuropa verkade Ellen Key (1900) i samma anda. Hon angrepp vid denna tid "själamorden i skolorna" och kritiserade hårt folkskolans undermåliga läseböcker som tillsammans med katekesläsningen helt dominerade skolvardagen. Som ett svar på detta startades några år in på 1900-talet ett unikt projekt, som engagerade de bästa författare som landet hade för att skriva just läseböcker. Den mest lästa kom att bli Selma Lagerlöfs *Nils Holgerssons underbara resa*. Där ägnas ett omfattande kapitel åt den svenska skolslöjden, eller rättare sagt åt dess främste förespråkare Otto Salomon och hans slöjdlärarseminarium på Nääs.

Det är märkligt vilken stor spridning som skolslöjden fick under några årtionden kring sekelskiftet och vilken stark ställning den fick som ett instrument för pedagogisk förnyelse. För nordbor kan detta äga sitt särskilda intresse eftersom mycket av kraften och inspirationen kom från vår del av världen.

Den tidiga svenska skolslöjden

Åren mellan 1880 och 1930 var den stora epoken i svensk skolslöjd. Otto Salomon var slöjdens store profet. Förmodligen utgjorde dåtidens skolslöjd Sveriges genom tiderna mest betydelsefulla bidrag till internationell skolutveckling, även om flera av de grundläggande idéerna kom via Uno Cygnæus. (Hartman, Thorbjörnsson & Trotzig 1995) Från när och fjärran kom skolfolk till Otto Salomon och slöjdlärareseminariet i Nääs för att där lära sig *the Swedish sloyd*. I första hand gällde det den hårda slöjden, alltså slöjd i trä och metall.

Slöjdpedagogiken utgick från en modellserie i stigande svårighetsgrad som krävde alltfler och alltmer avancerade färdigheter av slöjdaren. Var och en skulle arbeta i sin egen takt. Man började med något mycket enkelt, ett pennskaft eller en blompinne, och slutade med något tämligen avancerat.

Föremålen som skulle tillverkas kan beskrivas med orden vacker vardagsvara: enkla och hållbara konstruktioner, inga krusiduller och ingen lyx. Varje ny modell i serien krävde att man använde nya tekniker och verktyg samtidigt som också de tidigare inlärda färdigheterna kom titt användning. Det var fråga om modellinlärning i flera bemärkelser. De blivande slöjdlärarna tillverkade samma slöjdalster som de sedan skulle låta sina elever arbeta med. De övergripande målen och de grundläggande principerna för Nääs-slöjden sammanfattas i figur 1.

Otto Salomonsons pedagogiska program stod i kontrast till den grå pedagogik som genomsyrade folkskolan vid sekelskiftet. För honom gällde det föra in kroppsarbetet i en teoretisk skola för att därigenom kunna utveckla de unga människorna mer allsidigt. Skolan skulle vara till för hela eleven, inte bara för huvudet. Slöjden skulle vara frivillig för både lärare och elever, och fånga intresset genom att vara lustbetonad och givande.

> *"Slöjdundervisningens ändamål är dels att bibringa allmän handafärdighet och dels såsom hufvudsak, att hos lärljungen uppväcka håg för och kärlek till arbete samt inplanta hos honom vigten, behaget och fördelarne af ordning och noggrannhet, äfvensom nödvändigheten av uppmärksamhet, flit och ihärdighet."*
>
> Otto Salomon (1882)

De tio mål som Otto Salomon satte upp för slöjdundervisningen och för Nääs-systemet hade i stor utsträckning formalpedagogisk inriktning. Han menade alltså att eleverna genom att delta i slöjdundervisningen skulle lära sig något utöver själva slöjdandet, något som till och med var viktigare än slöjden och som utvecklade karaktären.

The goal of educational sloyd is:

1. to instil a taste for and love of labour in general
2. to create a respect for rough, honest, manual work
3. to develop independence and self-reliance
4. to train habits of order, exactness, cleanliness and neatness
5. to train the eye to see accurately and to develop a sense of beauty in form
6. to develop touch and to give general dexterity
7. to teach habits of attention, industry, perseverance and patience
8. to promote development of the physical powers
9. to give dexterity in the use of tools
10. to execute exact work and good products.

***

Educational sloyd shall:

a) build on the pupils own motivation and activity
b) engage both mind and body
c) be individualised
d) be carried out in a distinct advancing order
e) used the same exercises in the teacher training courses as in the educational sloyd implementation in the elementary school.

Figur 1.

Ten goals and five principles in the educational sloyd system of Nääs.

Genom slöjden skulle de bl.a. lära sig att tycka om att arbeta och att respektera kroppsarbetet. De skulle vänja sig vid ordning och reda. De skulle lära sig uppmärksamhet, noggrannhet, renlighet, flit och hederlighet, men också självständighet och självtillit.

Textilslöjden, eller den kvinnliga slöjden som det hette, hade inte en lika gynnad ställning som gossarnas slöjd. Metodiken hämtades från Tyskland. (Trotzig 1992) Den huvudsakliga uppläggningen sammanföll i stor utsträckning med träslöjdens. Det fanns alltså en modellserie som man följde i bestämd ordning. Men flickorna fick slöjda i större grupper, till lägre kostnader och oftast utan tillgång till särskilda lokaler.

Målsättningen för den tidiga skolslöjden påminner mycket om de värderingar som förmedlades i katekesundervisningen. Den Lutherska arbetsetiken hävdade att varje människa var kallad att tjäna sina medmänniskor genom att plikttroget sköta det arbete man hade fått sig anförtrott. Överensstämmelsen mellan katekesens arbetsetik och skolslöjdens mål måste ha bidragit till att slöjdämnet så snart etablerades i skolan.

Var den tidiga skolslöjden progressiv eller reaktionär?

Den svenska skolslöjdens eftermäle är splittrat. Redan tidigt uppstod olika slöjdfejder om hur man rätteligen borde undervisa i slöjd och om hur man skulle förhålla sig till Nääs-metoden.

Också i senare tiders historiska arbeten skiftar bilden av den svenska skolslöjden. Hans Thorbjörnsson är den som mest ingående studerat Otto Salomon och livet på Nääs. (Thorbjörnsson 1990) Det går inte att ta miste på hans stora entusiasm inför det som utspann sig på Nääs under skolslöjdens glansperiod. Flera internationella forskare har med Thorbjörnssons hjälp i Nääs funnit rötterna till sina respektive länders tidiga skolslöjd. På tyskt håll har man funnit klara likheter mellan Salomons idéer och reformpedagogiska strömningar på kontinenten. Nääs-systemet betraktas som reformpedagogiskt program på hantverkets och yrkespedagogikens område. (Reincke 1995)

Å andra sidan har flera svenska skolhistoriker i Nääs-slöjden sett exempel på folkskolans förstelning och brist på kreativitet. Åke Isling (1980, 1988) menar att Salomon visserligen var en klok pedagog, men att han föll offer för samtidens överdrivna systematisering och formalisering av undervisningen. Ulla Johansson (1987) har i sin avhandling visat hur slöjden användes i folkskolan för att fostra blivande arbetare och husmödrar inom ramen för ett klassamhälle. Någon frigörande slöjdpedagogik fanns inte inom synhåll.

Den moderna svenska skolslöjdens företrädare profilerade sig under 1950- och 60-talen genom att klart ta avstånd från Nääs-metodiken. Man ville bryta dess dominans och komma bort från mallslöjden, som det hette, för att i stället skapa utrymme för mer skapande verksamhet. Utan denna ändrade inriktning skulle knappast skolslöjden ha överlevt i den svenska skolan. (Sjögren & Lundberg 1992). Men den medvetna förändringen av slöjdämnets inriktning bidrog säkert ytterligare till den dubbelheten i bilden av skolslöjden.

Jag tror att kontrasterna mellan de olika bilderna av den svenska skolslöjden blir mindre om man försöker identifiera utifrån vilka perspektiv som bilderna har målats. Somliga forskare har inriktat sig på att studera *idéerna* bakom skolslöjden, under det att andra har försökt fånga *skolvardagen*. Mycket händer med en utbildningsidé när den förflyttas från den festliga formuleringsarenan, i Nääs eller på annat håll, till realiseringsarenan ute i landets folkskolor. Det är också en gammal erfarenhet att man inte ska döma de pedagogiska idégivarnas läror på grundval av efterföljarnas undervisning.

När det gäller den tidiga svenska skolslöjden så hade den i Nääs-seminariet en institutionaliserad plattform för spridningen av en lång rad progressiva skolidéer. Men det är ovisst hur mycket av detta som trängde ner till skolvardagen runt om i landet. Den på modellserien byggda metodiken fick däremot ett stort genomslag som varade under mycket lång tid. Men frågan är om inte den metodiken på fältet kom att ge uttryck åt ett helt annat pedagogiskt tänkande än det som på det retoriska planet spreds utifrån Nääs-seminariet.

Gemensamma motiv för skolslöjden

Vissa grundläggande motiv för att föra in olika former av hantverk, särskilt slöjden, in i skolvardagen var gemensamt för slöjdförespråkarna och den progressiva pedagogikens företrädare. Det gällde att söka nya arbetsformer i undervisningen, att bryta de teoretiska ämnenas dominans och att närma skolan till det omgivande samhället.

Jerome Bruner (1974) har fäst uppmärksamheten på vad som händer i en kultur när man för första gången bygger en skola. Det uppstår då ett innanför och ett utanför. Den verklighet där tidigare generationer hade levat och dött fanns utanför skolans väggar. Samtidigt var det just till denna verklighet som skolbarnen skulle socialiseras. Den omgivande vardagen måste därför representeras inne i skolan. Detta kräver ett representationssystem, som abstraherar verkligheten utanför skolans väggar på ett sätt som gör den hanterbar inne i skolan. Det gör att det samhälle som för första gången välsignas med en skola måste lära sig tänka på ett nytt sätt; man måste lära sig tänka i representativa tankefigurer i stället för i handlingskategorier.

Låt oss kalla detta för hästens problem. När folkskolorna etablerades var hästen ett omistligt inslag i vardagen, alltså måste den på något sätt representeras inne i skolsalen. Det förefaller som om det fanns två sätt att förhålla sig till denna uppgift. Antingen tog man fasta på att via olika metoder begreppsliggöra företeelsen för att sedan utgå från begreppen; eller också utgick man från elevernas erfarenheter för att därefter närma sig begreppen. Den första folkundervisningen renodlade den första linjen. Den progressiva motrörelsen tog fasta på den senare. Denna skillnad medförde att olika pedagogiska grupperingar kom att ställa olika förväntningar på slöjden. Mer om det senare, nu först till hästens problem.

Charles Dickens har genom sin kritik av det samtida skolväsendet betytt mer än de flesta för att bereda vägen för en mänskligare och mer barnnära undervisning. På många ställen gisslar han sin tids pedagoger. Hästens problem formulerade han framförallt i romanen *Hard Times* från 1854: Lilla Sissy Jupe börjar skolan hos Mr Gradgrind och tilldelas nummer 20 i den stora klassen. Hon har levt hela sitt liv på cirkus där hennes far är hästdressör.

> *(Mr Gradgrind:)"--Very well, then. Describe your father as a horsebreaker. He doctors sick horses, I dare say?"*
> *"Oh yes, sir."*
> *"Very well, then. He is a veterinary surgeon, a farrier and horsebreaker. Give me your definition of a horse."*
> *(Sissy Jupe thrown into the greatest alarm by this demand.)*

> *"Girl number twenty unable to define a horse."--*
> *"Bitzer", said Thomas Gradgrind. "Your definition of a horse."*
> *"Quadruped. Graminivorous. Forty teeth, namely twenty-four grinders, four eye-teeth, and twelve incisive. Sheds coat in the spring; in marshy countries, sheds hoofs, too. Hoofs hard, but requiring to be shod with iron. Age known by marks in mouth."--*
> *"Now girl number twenty," said Mr Gradgrind. "You know what a horse is."* Charles Dickens (1854)

Begreppsexercis av det här slaget har ända fram i våra dagar tillämpats i olika undervisningsmetoder. Dilemmat ligger alltså i det stora avståndet som skapas mellan undervisningens innehåll och vardagen utanför skolsituationen. För femtio år sedan formulerade ytterligare en hästflicka problemet på ett annat sätt. Hon har kallats det första moderna barnet; hennes fullständiga namn var Pippilotta Viktualia Rullgardina Krusmynta Efraimsdotter Långstrump.

> *"--Fröken höjde blicken för att se, hur det gick med ritningen. Då satt alla barnen och tittade på Pippi, som låg på golvet och ritade av hjärtans lust.*
> *- Ja men Pippi, sa fröken otåligt, varför ritar du inte på papperet?*
> *- Det har jag ritat fullt för länge sen, men inte får hela min häst rum på det där lilla fnuttiga papperet, sa Pippi. Just nu håller jag på med frambenen, men när jag kommer till svansen, får jag nog ge mig ut i korridoren."* Astrid Lindgren (1948)

Hästens problem handlar alltså om svårigheten att få in det vardagliga, det levande och det barnnära in i skolan. Vid sekelskiftet såg många skolslöjden som en väg att uppnå detta. Slöjden motsvarade arbetsmoment som fanns i varje hem, den utgjorde en levande arbetsprocess och upplevdes positivt av de flesta. Men bakom dessa allmänna argument för skolslöjden visar det sig att olika slöjdintressenter hade olika motiv för att förespråka ämnet.

Två kontrasterande argumentationslinjer

De bakomliggande motiven till den svenska folkskolans omhuldande av slöjden var mycket olika de argument som anfördes av den progressiva rörelsen i dess amerikanska tappning. Så här skildrade Selma Lagerlöf bakgrunden till Otto Salomons arbete:

> "*--nu tyckte sig den unge herrn förstå, att i den stugan, där hemarbetet hade upphört, där hade hemtrevnaden och välståndet flyttat bort. Någon gång träffade han på ett hem, där far snickrade samman stolar och bord och mor vävde, och det var lätt att se, att där voro människorna inte bara mer välbärgade, utan också lyckligare -- den, som en gång hade fått sin hand uppövad till att sköta kniven, han skulle lätteligen lära sig att föra smedens slägga och skomakarens hammare*". Selma Lagerlöf (1907)

Dewey (1899) har samma utgångspunkt som finns i Selma Lagerlöfs skildring, dvs att tiderna har förändrats och hantverket har hamnat på undantag i skuggan av industrin. Men han tar framförallt fasta på att de vardagliga erfarenheterna av ett näraliggande produktionsliv hade försvunnit. De hade tidigare givit barnen anledning att reflektera och söka lösningar på reella problem. När skolplikten infördes bröts kontakten mellan denna erfarenhetssfär och barnens lärande och utveckling, blev undervisningen steril. Kontakten måste därför återupprättas genom att hantverksmoment fördes in i skolan. Men det var alltså inte bortfallet av försörjningsvägar som han ville kompensera, eller fostran till arbetsflit, utan bortfallet av erfarenheter. Det var därför också han sökte en lösning på 'hästens problem':

> "*We must conceive of work in wood and metal, of weaving, sewing, and cooking, as methods of living and learning, not as distinct studies. We must conceive of them in their social significance, as types of processes by which society keeps itself going, as agencies for bringing home to the child some of the primal necessities of community life, and as ways in which these needs have been met by growing insight and ingenuity of man; in short, as instrumentalities through which the school itself shall be made a genuine form of active community life, instead of a place set apart in which to learn lessons.*" John Dewey (1899)

Det slöjden kan ge är alltså grundläggande erfarenheter utifrån vilka man kan reflektera och studera förhållanden som sträcker sig långt utanför både slöjdlokalen och skolan. Detta är vad som borde åsyftas med *learning by doing* i en slöjdsal:

> "*--we have been led to believe that there is a positive inherent value in the formal training – apart from its social relations and suggestions. Now, we ought to go deeper than this, in our conception of the educational position of the constructive activities. -- We should*

see what social needs they spring out of, and what social values, what intellectual and emotional nutriment, they bring to the child which cannot be conveyed as well in any other way." John Dewey (1901)

Tidiga kontakter och efterföljande avståndsmarkeringar

Det fanns tidiga kontaktpunkter mellan denna nordiska slöjden och den amerikanska progressivismen. Vi kan utgå från att man stötte på varandra på de stora internationella utställningarna, som var den tidens mötesplatser för innovatörer av alla slag, även på det sociala och pedagogiska området. Salomon var t ex representerad på utställningarna i Chicago 1893, Paris 1900 och S:t Louis 1904. Fler av Salomons skrifter översattes också till engelska och gavs ut i England och USA. Några av Deweys nära medarbetare for till Nääs för att gå slöjdkurser där.

Det var till och med så att John Dewey 1904 skrev ett brev till Nääs och bad att Salomon skulle komma och ha slöjdkurser i anslutning till Deweys pedagogiska verksamhet. Han skrev att om det inte gick att ordna kunde någon av Salomons medarbetare fara. Det blev emellertid inget av med den saken. Otto Salomons hälsa var dålig och hans arbetsbörda var stor.

Men företrädare för den amerikanska progressivismen fick ändå träffa på den *the Swedish Sloyd*. Ett tiotal svenska lärare med slöjdutbildning emigrerade åren runt sekelskiftet till USA. Särskilt framgångsrik var Salomon-eleven Gustaf Larsson som byggde upp ett eget slöjdlärarseminarium i Boston där man vet att ca 400 lärare utbildades.

Att mötas innebär dock inte alltid att man också förstår varandra. Med tiden framfördes skarp kritik mot den svenska slöjden. Den amerikanske barnpsykologen Stanley Hall kritiserades slöjdsystemets tyranni, dvs den stelbenthet som den fasta studiegången genom modellserien innebar. I en något mildare form återkommer denna kritik i Deweys viktigaste utbildningsfilosofiska arbete:

> *"Activities which follow definite prescription and dictation or which reproduce without modification ready-made models, may give muscular dexterity, but they do not require the perception and elaboration of ends, nor (what is the same thing in other words) do they permit the use of judgement in selecting and adapting means. Not merely manual training specifically so called but many traditional kindergarten exercises have erred here."*
>
> John Dewey (1916)

Praktiskt arbete i skolan

Progressivismens kritik av den svenska skolslöjdens gällde den roll som det praktiska arbetet tilldelades i pedagogiken. Man var som tidigare framgått mycket tveksam till de formalpedagogiska tankarna om skolslöjden som en verksam fostran till arbetsflit och noggrannhet. Man ansåg också att den uppvisade alltför stor inriktning på reproduktivitet, vilket motverkade utvecklingen av elevernas kreativitet. Dessutom menade man att det förekom för mycket händighetsträning.

I figur 2 har jag sammanfört begreppen fostran - träning - reproduktion och kreativitet i ett analysschema. De progressiva pedagogerna kritik mot den tidiga svenska skolslöjden visar att man ansåg att den hade givits en utformning som motsvarar position 1 och 2 i figuren. Möjligen var det också så att de med denna kritik också menade att hantverket som företeelse hade kommit att behålla sin konserverande karaktär, så som vi känner den från kunskapsöverföring och tradering inom skråväsende och folklig tradition. Själva eftersträvade man hantverksinslag som var integrerade med andra skolämnen och som på ett allmänt sätt utmanade elevernas kreativitet såväl inom skapande ämnen som inom teoretiska studier (position 3 i figuren).

		WORKING PROCESS IN SLOYD	
		reproductiv	**creative**
GOALS	education (in general)	2	3
	training (of skills etc.)	1	

Figur 2.

Goal and working process in educational sloyd.

När man studerar grundstrukturen i läroplansutvecklingen i den svenska skolslöjden kan man märka hur utvecklingen i huvudsak gått från händighetsträning till allmänt fostrande eller personlighetsutvecklande profilering, och från reproduktivitet till kreativitet. Utvecklingen har alltså skett i den riktning som förespråkades av de progressiva pedagogerna. Det stora paradigmskiftet skedde i Sverige i samband med grundskolereformen under 1950- och 60-talen, alltså ett halvsekel efter mötet mellan Nääs-slöjden och den amerikanska progressivismen. Förändringen beskrivs på olika sätt beroende på vem som för pennan. Det är ofrånkomligt att syftet var att fjärma skolslöjden från den tradition som utvecklades kring Nääs-seminariets modellserie. Man vill komma bort mallslöjden för att ge utrymme för ett större mått av skapande verksamhet. Utan denna förändring hade knappast slöjden överlevt i den svenska skolan.

Det är lätt hänt att den här typen av läroplansutveckling uppfattas som absolut, som om dagens sätt att se på praktiskt arbete i skolan är det enda giltiga. Varje målskrivning och läroplanslösning bör dock ses mot bakgrund av vad det är för skolsituation som gäller. Det är inte säkert att företrädarna för den progressiva experimentpedagogiken i början av vårt århundrade hade så mycket gemensamt med de svenska folkskollärarna när det gäller utbildning och arbetsvillkor. Bortsett från deras intresse för hantverkets möjlighet att skapa omväxling i skolarbetet. Det är också så att olika skolor kan ha olika uppgifter och av den anledningen ge hantverket olika plats och framtoning. Det framgår klart när man ser på de skolor som den svenska möbelarkitekten Carl Malmsten grundade under sin levnad (Hartman 1989).

Alla svenskar vet hur en riktig Malmstensmöbel ser ut. Man ser dem överallt i folkhögskolor, församlingshem och andra offentliga byggnader. Men ganska få vet att han var lidelsefullt engagerad i utbildningsfrågor och att han själv grundade flera skolor. Hantverket gavs en stort utrymme i alla hans skolor. Han själv var ju arkitekt, men han såg sig nog gärna som en läromästare, en snickarmästare omgiven av lärlingar och gesäller. Men på de olika skolorna gavs hantverket helt olika roller.

En utgångspunkt för Malmsten var hans kritik mot det dominerande sättet att utforma skolslöjden, dvs mot Nääs-metodiken. Den typen av reproduktiv skolslöjd motarbetade han med stor frenesi. Men ett reproduktivt hantverk dominerade å andra sidan arbetet i hans egen verkstadsskola, där man utbildade möbelsnickare, som huvudsakligen arbetade med att tillverka Malmstens egna möbelmodeller. Träningen av hantverksskickligheten stod här i centrum.

		WORKING PROCESS IN SLOYD	
		reproductiv	**creative**
GOALS	education (in general)	/Nääs/	Olofskolan Nycelvikskurser
	training (of skills etc.)	Malmstens Verkstadskola	Capellagården

Figur 3.

Goals and working process in Carl Malmstens different educational projects.

I Olofskolan, den experimentskola han startade på trettiotalet för barn i låg- och mellanstadieåldrarna, gavs skolslöjden en kreativ inriktning. Den allmänna personlighetsutvecklingen och det fria skapandet var de viktigaste målen. Denna inriktning fanns också på Nyckelvikskurserna, återkommande sommarkurser för ungdomar och vuxna som närmast fungerade som ett slags propedeutisk orientering för sådana som ville pröva hantverk och skapande verksamhet. Capellagården slutligen ger utbildning på avancerad nivå i olika konsthantverk. Utbildningen syftar alltså till att både utveckla hantverksskickligheten och kreativiteten. (Se figur 3)

Hantverket kan alltså ges olika roller i olika pedagogiska sammanhang. Vad som sedan sker när hantverket lämnar den retoriska nivån i festtal, debattskrifter eller läroplanstexter, för att omsättas i praktiken i en slöjdsal eller verkstad, det bestäms i stor utsträckning av den pedagogiska kontexten. Det är vad man kan lära av ett studium av hantverkets roll i det pedagogiska förnyelsearbetet i början av vårt århundrade.

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Multiteoretisk metodologi i slöjdforskning

Abstrakt

Forskningen inom slöjdområdet har utvecklats i Finland under de senaste tio åren i anknytning till utbildningen av slöjdlärare. Forskningsundervisningens tyngdpunkt har legat på praktikforskning, inte på ren forskning. Vid praktikforskning lär sig läraren att teoretisera sitt eget arbete och att förvandla dunkla tankar till medvetandegjorda begreppskonstruktioner. Produktionsverksamheten i sig och i förening med undervisning och inlärning samt utvecklingen av den egna professionen är centrala begreppskonstruktioner. Syftet med teoretiseringen är att upptäcka och undersöka alternativ genom vilka man kan förnya det egna undervisningsarbetet och slöjden. I artikeln granskas metoder genom vilka det multiteoretiska slöjdfenomenet kan undersökas och teoretiseras.

Sökord: Praktikforskning, teoretisering som ger beredskap för fortgående förändring, multiteoretisk slöjdfostran, slöjdpedagogisk forskning.

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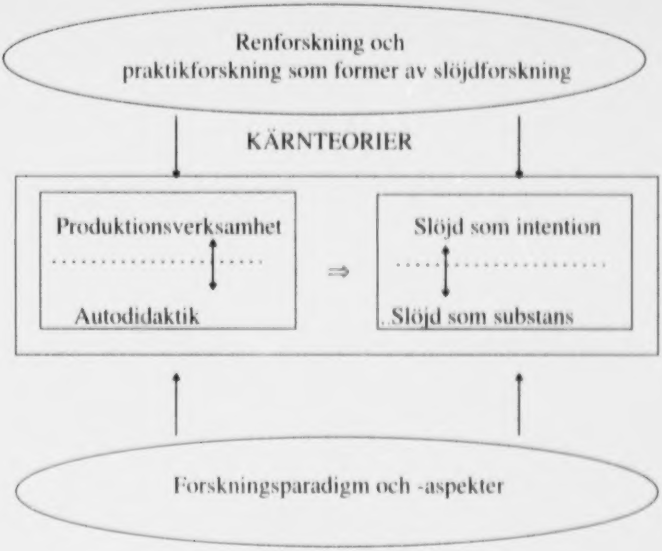
Multiteoretisk metodologi i slöjdforskning

Inledning: Den finländska slöjdforskningens aktuella situation

Forskningen inom slöjdområdet har utvecklats i Finland under de senaste tio åren i anknytning till utbildningen av slöjdlärare. Så har skett också i övriga nordiska länder. Visserligen har hela utbildningen i Finland varit förlagd till universiteten sedan mitten av 1970-talet. Därför har professurer i slöjdforskning inrättats vid de pedagogiska fakulteter som ansvarar för slöjdlärarutbildning. Dessutom har slöjdpedagogiken och slöjdvetenskapen skaffat sig huvudämnesstatus. Slöjdpedagogiken är placerad vid Åbo universitet (Raumo) och Åbo Akademi (Vasa). Slöjdvetenskapen är förlagd till Helsingfors universitet och Joensuu universitet (Nyslott). På grund av att slöjdforskningen sker i anknytning till akademisk lärarutbildning har man forskningsvägen sökt kunskap och teorier både om slöjdens 'rena' väsen och om utvecklingen av den praktiska lärarberedskapen. Slöjdforskningen har med andra ord starkt inriktats på ren forskning och praktikforskning.


Renforskning och
praktikforskning som former av slöjdforskning
KÄRNTEORIER
Produktionsverksamhet
Autodidaktik
⇒
Slöjd som intention
Slöjd som substans
Forskningsparadigm och -aspekter

Figur 1.

Slöjdforskningens kärnteorier, forskningsformer, -paradigm och -aspekter (jfr Peltonen 1985).

I ren forskning skapas och utvecklas kärnteorier för den pedagogiska slöjden med hjälp av s. k. allmänna vetenskapliga forskningsmetoder. Genom ren forskning är det inte meningen att utveckla t. ex. det egna arbetet, utan endast att söka vetenskaplig sanning, dvs. forskning om såväl själva forskningsteorin (forskning om forskning) som forskning om substansområdets kärna. Forskningen om forskningsteorin klarlägger det logiska framåtskridandet i forskningstänkandet genom vilket man styr det teoretiserande tänkandet om forskningsobjektet. (Cowen 1996, vii-x) Forskningen om substansens kärna söker och teoretiserar forskningsobjekt, verifierar teorier och granskar validiteten. För närvarande utgår slöjdforskningen från två kärnteorier:

1) teorin om förverkligandet av slöjdintentionen genom produktionsverksamhet. Slöjdens betydelse definieras nuförtiden så att slöjden förstås som produktionsverksamhet genom vilken subjektet producerar unika produkter, alster. Den unika produkten hjälper subjektet att uttrycka sig genom många olika kulturformer, exempelvis teknologiska, yrkesmässiga, konstnärliga, samt genom estetisk-formgivningsmässiga uttrycksformer. (Peltonen 1995a)

2) teorin om slöjdens autodidaktiska karaktär (funktion), dvs. teorin om självfostran genom slöjd. Slöjdens autodidaktiska karaktär hjälper den studerande att lära sig ett sådant sätt att tänka som krävs för intentionell produktionsverksamhet i slöjd.

I praktikforskning används dels ren forskning, dels vardaglig slutledning vid utvecklingen av det egna arbetet och det egna yrket. Forskning om forskningsteorier används aldrig som hjälp i praktikforskning. Dylik metaforskning kommer till användning vid ren forskning (Moore 1983). Med praktikforskning avses vetenskapligt arbete som stöds av allmänna teorier som i sin tur stöds av allmänna metoder, t. ex. teorin om lärarens strävan att utveckla sig själv och sitt eget arbete. Praktikforskningens grundmotiv är att läraren måste förändra dolda uppfattningar om lärararbetet till medvetna uppfattningar som är tillämpbara i praktiken. För detta finns vetenskapliga forskningsmetoder, genom vilka uppfattningarna teoretiseras. Sådan forskning gäller ofta lärarens och elevens pedagogiska behov (Giroux 1994, 278-308). Forskarbehörighet får man i lärarutbildningen.

Speciellt inom praktikforskningens område har man kommit fram till att slöjdområdet måste definieras med hjälp av teorier från många olika vetenskapsområden. Detta gäller speciellt utbildningen till lärare, att växa som lärare. I allmänhet innehåller teorierna som gäller den studerandes växt till slöjdlärare teknologiska teorier om produktförädling, psykologiska teorier, teorier om produktionsprocessen innefattande projektgestaltning, didaktiska teorier om hur tänkande om produktionsverksamhet skall läras ut samt autodidaktiska teorier om hur det egna arbetet kan utvecklas genom självstudier. Slöjdlärarens arbete styrs alltid av multiteoretisk teoretisering av det egna arbetet och teoretisering av tillämpbara metoder för studier och självstudier (Peltonen 1996, 7-14).

Avgörande och viktigt i multiteoretisk slöjdforskning är att förstå att det inte är fråga om att forskaren/läraren skall ha multivetenskapliga teorier till sitt förfogande som självändamål. Läraren skall i sin verksamhet själv teoretisera många olika slöjduppfattningar, som ger honom kompetens att med hjälp av dessa teoretiska uppfattningar styra sin egen växt till slöjdlärare. Lärarutbildningstiden är det enda tillfället att ge slöjdläraren de redskap han behöver för att utveckla sig som lärare. Därför är det viktigt att i lärarutbildningen betona praktikteorier och sådana forskningsmetoder som utvecklar teoretiska uppfattningar som är lämpliga för det egna arbetet och den egna personen.

Då man begrundar var tyngdpunkten i slöjdforskningen skall ligga i fältet mellan ren forskning och praktikforskning, kan man konstatera att sådan forskning som ger läraren beredskap att själv utforska sin växt som slöjdlärare kommer i första hand. Den rena forskningen är viktig, men i detta skede kommer den i andra hand. Detta beror på att slöjdforskningen inte för tillfället har så stort behov av forskning som inte är förbunden med slöjdundervisning.

Utgående från denna synvinkel kan multiteoretisk metodik i slöjdforskning definieras på följande sätt:

Med multiteoretisk metodik för slöjdforskning avses metoder som valts på ett ändamålsenligt sätt och genom vilka praktiska uppfattningar teoretiseras och som bl. a. kan tillämpas av slöjdläraren för utveckling av det egna arbetet. Avsikten med att teoretisera praktiska uppfattningar är att medvetandegöra dolda uppfattningar. Vetenskaplig forskning är ett medel, ett instrument, som används för att medvetandegöra dolda uppfattningar (Peltonen 1996, 7-14).

Teoretisering av dolda uppfattningar lyckas då 1) man känner till kärnområdet för de dolda uppfattningarna och 2) då man känner till teoretiseringsfaserna och de metoder som innefattas i dessa faser.

I figur 2 illustreras schematiskt de delområden i produktionsverksamhet som medvetet borde behandlas då man studerar teoretisering av produktionsverksamhet. Avsikten med teoretiseringen är dels att inom varje delområde skapa begreppsliga konstruktioner för styrning av produktionsverksamheten, dels att tänka ut alternativa lösningsmodeller som kan undersökas och ifrågasättas. Med hjälp av de begreppsliga konstruktionerna är det möjligt att bedöma hur bra den producerade produkten och produktionsprocessen motsvarar den teoretiserade förhandsgestalten, skissen och planen.

MEDVETANDEGÖRANDE (GRUNDFAS)	Praktikuppfattning av slöjd: UPPFATTNINGSFORMER K 1 2 3 4
TEORETISERINGSFASER Fas A = Metoder för problematisering Fas B = Metoder för identifiering av kärnfenomen Fas C = Metoder för datainsamling Fas D = Metoder för validering av verifieringsmetoderna	Strategier för validering av metoder i slöjdpedagogisk forskning

Formerna för de praktikuppfattningar som styr slöjdlärarberedskapen:

K Kärnfenomenet: Uppfattning av produkten
1. Uppfattning av vilken beredskap som behövs för produktens förädling
2. Uppfattning av vilken beredskap som behövs för behärskning av produktionsprocessen
3. Uppfattning av vilket tänkande som behövs förbehärskandet av undervisning om produktens uppbyggnad och produktionssituationen
4. Uppfattning av de färdigheter som behövs för utvecklandet av det egna yrket

Figur 2.

Områden i multiteoretisk forskningsmetodik i slöjdpedagogik.

Avsikten med teoretiseringen är att medvetandegöra dolda uppfattningar. T. ex. då forskningens avsikt är att utveckla en förbättrad tandpetare består grundfasen (medvetandegörandet) till en början av att man har en föreställningsbild av en traditionell tandpetare. Man gestaltar med andra ord en traditionell verksamhetshelhet (en kärnteori om verksamhetshelheten vid framställningen av en tandpetare). För det andra tillämpar man i grundfasen t. ex. den traditionella helhetsprincipen gällande tandpetarens produktkonstruktion (en reproducerad tandpetare) vid gestaltning och skissering av densamma. För det tredje tillämpar man i grundfasen t. ex. traditionsprinciper gällande produktionsprocessen vid gestaltning och planering av den reproducerade tandpetaren. Denna grundfas måste alltid förekomma, också fastän det till en början enbart skulle vara fråga om ett nytt varumärke för vilket man inte kan föreställa sig en etablerad existensform. I samband med nya produktmotiv måste man söka något liknande produktmotiv för det nya varumärket (t. ex. ‘marunki’) med vars hjälp man kan föreställa sig produktens traditionsbundna väsen och form. Genom att gå tillväga på detta sätt får man en konkret början. Härvid bör man beakta att ingen som helst analogi är den rätta utgångspunkten. Analogin måste uppfattas som en motsvarighet som man kan riva upp för att sedan gestalta på nytt, ge en ny form och ett nytt väsen. (Zimbardo 1992, 254-300) Att skapa analogier utgör grundfasen vid medvetandegörandet.

Problematiseringen är teoretiseringens första fas (fas A). I denna fas ifrågasätts alla begreppskonstruktioner för reproduktionstandpetare: den traditionella tandpetarens produktionshelhet, gestaltningen och skisseringen av produktkonstruktionen samt planen för hur produktionsprocessen skall förverkligas. Avsikten med ifrågasättandet är att peka på de moment som kan förbättras. Som förbättringskriterier används bl. a. mångsidigare teknologiska lösningar (alternativa material, energi, kontrollinformation, formgivning och användningsområde).

I teoretiseringens andra fas (Fas B) definieras kärnfenomen, teori, gällande en ny och förbättrad tandpetare genom att man pekar på en förbättrad produktionshelhet, produktskiss och plan för produktionsprocessen. Den nya teorins värde grundar sig på förbättringskriteriernas kvaliteter.

I den följande fasen (fas C) klargör man hur den nya teorin om tandpetaren kan användas som hjälp vid val och tillämpning av metoder i produktionsforskning. Den första alternativa metoden kan vara a) forskningsmetoder för undersökning av produktionstraditioner, varav två alternativ är kända: 1) förklaringsmetoden (förklaring av en redan utförd produktion eller 2) förbättringsmetoden. I forskning som sker med hjälp av förklaringsmetoden används teorin som identifierats i fas B endast för att förklara varför man stannade för en specifik lösning i den egna produktionsprocessen eller varför den traditionella produkten är utformad som den är. Då förbättringsmetoden tillämpas i forskningen används teorin vid styrning och korrigering av den egna produktionsprocessens framåtskridande fas för fas. Metoden gäller både traditionell och modern produktion.

Den andra alternativa modellen kan vara 2) prototypforskning. Utgångspunkten är då att man alltid söker ett nytt, subjektivt produktmotiv och varumärke. (jfr Uotila 1996, 15-24). Denna metod kan i sin tur innehålla åtminstone två alternativ: 2a) komparativ (eller jämförande) forskning och 2b) tävlingsforskning. Vid komparativ forskning utgår man för det första från att man vid gestaltningen av produktionsmotivet och varumärket vill tillfredställa bekymmer och behov som gäller den egna livssituationen. Varumärket består då t. ex. i aningar och lösningsdrömmar om hur de egna livsbehoven skulle kunna tillfredsställas eller av ett objekt som är brinnande åtråvärt. För det andra förenar man två gamla produktionslösningar, men jämförelsen utvisar att det inte är möjligt att förena dessa utan 'omstörtande' problemlösning. Problemlösningsteori används då som styrnings- och evalueringsmetod både vad gäller produkten och produktionsprocessen.

Vid tävlingsforskning inleder man på samma sätt som vid komparativ forskning. Det nya varumärket teoretiseras emellertid i detta sammanhang till två problemlösningsteorier. Efter att man med hjälp av dessa teoriversioner beslutat sig för två produkter och produktionsprocesser låter man produkterna tävla med varandra i den behovsomgivning för vilken de ursprungligen skapats. På basen av tävlingsresultatet väljs den bästa lösningen. Syftet för teoretiseringen kan vara att utveckla en individuell flexibel problemlösningsförmåga. (Heikkilä & Heikkilä-Laakso 1997, 200-249; Tatsuno 1990; Gouger 1995)

I teoretiseringsfas D strävar man till att klarlägga hur väl man lyckats i teoretiseringen av forskningsobjekten och metodanvändningen med avseende på validitetsaspekter. I detta sammanhang används konventionella metoder för validitetsbedömning av kvalitativ och kvantitativ forskning. I den föregående struktureringen har enbart beaktats hur teoretiseringen kan användas som hjälp i produktionsverksamheten och hur dunkla tankar byts till medvetandegjorda begreppskonstruktioner. Då det är fråga om slöjdpedagogik måste man dessutom klarlägga hur det teoretiserande tänkandet kan läras och undervisas samt hur det kan användas för utveckling av den egna professionen. Därför är slöjdpedagogisk forskning alltid multiteoretisk. I det följande granskas multiteoretisk metodik i slöjdforskning som en del av vetenskaplig forskning.

Den vetenskapliga forskningens struktur

Definition av vetenskaplig forskning

Vetenskaplig forskning är en verksamhet som utförs av människor. Det finns uppställda mål samt medel (strategier) för denna verksamhet. Målet är att utveckla ny teori och att härvid skapa och utveckla ny kunskap. Medlen är de vetenskapliga metoderna som används vid skapandet och utvecklandet av teorier. Metodologierna kan samlas till en forskningsansats. Metodologierna styrs också av rådande forskningsparadigm. Dessutom påverkas den vetenskapliga verksamheten av forskningssamfundens institutionella och kulturella kontext samt av strävan att påverka samhället.

Mål

Slöjdforskningen har på samma sätt som i vetenskapen i allmänhet två teoretiseringsmål.

a) Det första målet är att skapa en kärnteori för forskningsobjektet, grundfenomenet, vilket forskarna i första hand behöver. Det är då fråga om mål för ren forskning.

b) Det andra målet är att skapa teoretiska praktikuppfattningar som användarna utvecklar i det praktiska arbetet 1) t. ex. läraren själv som medel för utveckling av det egna arbetet, men också forskaren som undervisar om konstruktion och utveckling av slöjd- och slöjdpedagogisk teori med hjälp av forskarutbildning. Det är då fråga om mål för praktikforskning.

Metodologi: läran om strategier för skapandet och utvecklandet av nya teorier om forskningsobjektet

Metodologin kan delas i aspekter utgående från vilka verksamhetsformer som skall förverkligas med hjälp av olika metoder, dvs. det gäller att skapa teori som är relevant för verksamheten ifråga.

De allmänna metodaspekterna är följande:

1) Metoder för den undersökta världen, dvs. för problematisering av observationer, erfarenheter och uppfattningar (A = problematiseringsmetoder). Ofta förenar man direkt problematiseringsmetoderna till aspekten som gäller definitionen av grundfenomenet. Då är det fråga om att gestalta forskingsobjektet inom problemområdet till ett kärnbegrepp och till en referensram, dvs. metoder för gestaltning av kärnfenomenet (B = metoder för teoridefiniering).

2) Metoder för datainsamling för skapandet/verifierandet av teori (C = datainsamlingsmetoder)

3) Metoder för verifiering av giltigheten, oavhängligheten, öppenheten och inverkan (D = validitetsverifieringsmetoder).

Metoderna kan grupperas enligt forskningsansats. Fenomenologisk ansats innefattar följande element: Hermeneutisk problematisering och denfiniering, kvalitativ datainsamling och kvalitativ verifiering av kunskapens validitet. Positivistisk ansats innefattar följande element: logisk-empirisk definition av kärnfenomen, kvantitativ datainsamling och kvantitativ verifiering av kunskapens validitet. (Soininen 1995, 19-23)

Metodologiska paradigm

Genom metodologiska paradigm uttrycker man ofta det specifika forskarsamfundets avsikt med det forskningsarbete som förverkligas. Paradigmen är ofta en sammanfattning av tidsandan, arbetssamfundets forskningstraditioner, forskarnas och forskningsinstitutionernas ideologi, kulturella värderingar och religiösa synsätt. (Heikkilä & Heikkilä-Laakso 1997, 196-198).

Kärnteorier och paradigm i finländsk slöjdpedagogik

Kärnteorierna består av teorin om produktionsverksamhet och teorin om subjektets autodidaktiska förhållande till produktionsverksamheten. Slöjden är inte ett självständigt fenomen. Den är endast en avsikt som förverkligas med hjälp av produktionsverksamhet. Nuförtiden ligger avsiktens kärna i att slöjden består av alla de medel med vilka människan överför sin fysiska energi till substansen ur vilken hon förädlar en unik produkt. Den unika produkten är subjektets sätt att uttrycka sina idéer om medlen (strategierna) för reglering av sitt eget liv. Tanken att slöjden enbart består av att använda händerna är inte förenlig med vad som avses med slöjd, utom då det är fråga om att genom produktionsverksamhet utveckla handafärdighet. (Lindfors 1995, 16-39)

I produktionsverksamheten är det fråga om att förädla en idé till en produkt genom arbete som ingår i olika verksamhetsfaser och genom att tillämpa faserna i en specifik materiell miljö. Att ifrågasätta den första föreställningsbilden är en viktig del av produktionsverksamheten. I övrigt är hela fenomenet mycket mångfasetterat. Forskningsparadigmet påverkar gestaltningen av produktionsverksamhetens grundteori, speciellt påverkar paradigmet det sätt på vilket man gestaltar grundteorin. (Heikkilä & Heikkilä-Laakso 1977, 196-197)

I Finland finns för närvarande tre forskningsparadigm: 1) slöjdvetenskapens paradigm, 2) slöjdpedagogisk tidsrelaterad didaktik och 3) slöjdpedagogisk kulturexpressiv didaktik.

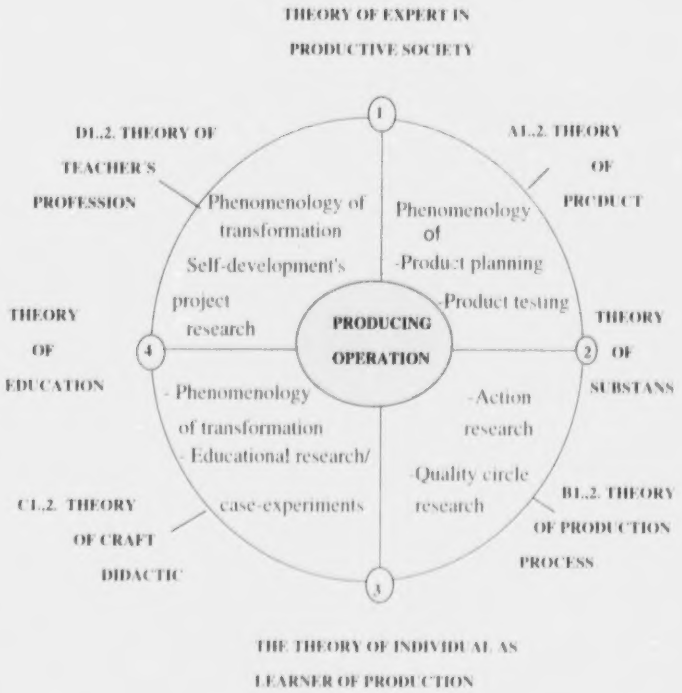
Slöjdvetenskapen som forskningsparadigm betonar interaktiv substansrelaterad självfostran. Det första slöjdpedagogiska paradigmet betonar undervisning och inlärning gällande transaktionistisk förhandsgestaltning samt utvecklingen av färdigheter för framtiden. Det andra slöjdpedagogiska paradigmet betonar å sin sida undervisning och inlärning gällande uttryck och internalisering av en kulturidentitet. Alla tre paradigm är humanistiska.

När man analyserar paradigm kan man se, att metoderna inte är lika beroende av paradigm som slöjduppfattningar är. I den följande texten behandlas iden om uppfattningar och metoder utgående från figur 3.

Strategier för validering av metoder i slöjdpedagogisk forskning

Med valideringsstrategi avses den helhetsplan genom vilken man förenar teorier och metoder i forskningen i avsikt att åstadskomma en valid forskningsverksamhet inriktad på att förnya ramteorin. I figur 3 illustreras den multiteoretiska valideringsstrategin då forskningen gäller slöjd-pedagogik.

Valideringstrategin upptar bl.a. de aspekter som läraren eller lärarkandidaten måste beskriva i sin forskningsrapport då forskningen gäller slöjd-pedagogiska forskningsobjekt. I slöjdpedagogisk forskning betonas att arbetet skall utmynna i både en skriftlig rapport och en produkt / ett alster, vilka vardera bevaras. Detta gäller då forskningen tyngdpunkt är slöjdpedagogisk. Då utbildningen är inriktad på pedagogik, ligger tyngdpunkten i forskningen främst på slöjdinlärning, samhällsrelaterade kontexter eller lärarens verksamhet. I det följande beskrivs i korthet de metoder som presenterades i föregående avsnitt.


THEORY OF EXPERT IN
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OF CRAFT
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3
THE THEORY OF INDIVIDUAL AS
LEARNER OF PRODUCTION

Figur 3.

Validering av metoder i slöjdpedagogisk forskning. Metoderna är relaterade till de teorier som genereras.

A1) (Theory of product and planning research) Strategin vid planering av en ny produkt samt reflektionen gällande känrnfaser, vilken sker i form av självevaluering, benämns planeringsfenomenologi. För evalueringen svarar produktionsprojektets medlemmar. De är i allmänhet två till tre. Produktens planeringsstrategi är beroende av den logik, som används vid planeringen. Planering, som sker genom reproduktionslogik skiljer sig från prototypplanering. Planeringen dokumenteras vid produktionsgruppens datorsessioner, genom bandingspelningar osv. Alla kvalitativa metoder för dokumentation av situationsobservationer kommer i fråga.

A2) (Theory of product and product research). När en färdig produkt bedöms, koncentrerar man sig i bedömningen på evalueringsforskning. Härmed avses, att kriterierna för bedömning av produkten söks ur utbildnings- och undervisningsperspektiv, inte ur produktens marknadsförings- eller serietillverkninsperspektiv. Avgörande är att bedömningen fokuserar på sådana produktkavaliteter, som visar förädlarnas förmåga att behärska den produktionsprocess, som lett till ifrågavarande resultat. Som evalueringsmetoder kan man använda sig av case - produkttest, självevaluering eller projektledarens evaluering. Projektledaren kan använda sig av på förhand uppställda kriterier i produktplaneringen samt sitt intuitiva expertomdöme.

B1) (Theory of production process and action research) Uppföljningsforskning av produktionsprocessen kan mycket väl förverkligas med tillhjälp av den aktionsforskningsmetodologi som Suojanen (1992) utvecklat.

B2) (Theory of production process and quality circle research). Kvalitetskretsforskning har ännu inte prövats i forskning gällande produktionsprocesser. Sarala (1993) har emellertid behandlat tillämpningen av denna forskningmetod i samband med kollegial inlärning. Hans artikel ingår i verket *Aikuisten oppimisen uudet muodot* (Nya former för vuxenutbildning) utgiven av Kajanto (1993). Kärnpunkten här är att de som deltar i produktionsprojektet snabbt och smidigt lär sig kvalitets-bedömningsprinciper som är tillämpbara i nya förhållanden.

Vid rapportering av produktionsprocesser är det viktigt att teorin om behärskningen av produktteknik alltid behandlas i ett särskilt kapitel.

C1) (The theory of craft didactic and transformation research). Då man försöker omforma produkt- och produktionsprocessen från vuxenstadiet till grundskolstadiet behövs transformeringfenomenologi. Vid transformering kan man bl. a. använda co-operativa inlärningsmetoder. Vid tillämpningen av denna metod försöker grundskoleleverna och produktprojektets medlemmar tillsammans komma på hur vuxenprodukten skulle kunna göras om till ett medel i elevens verksamhetshelhet. Ett centralt mål utgör kartläggningen av elevens verksamhetshelhet. Vid kartläggningen används diskussioner i små grupper som metod samt olika strategier att få barnen att delta i de vuxnas projekt. Som dokumentinstrument kan användas elevuppsatser, diskussionsprotokoll och olika bandinspelningar. I forskningsrapporten kan den här delen förenas med den förstnämnda (A1) eller rapporteras skilt för sig.

C2) (Theory of craft didactic and calssroom transformation research). Med undervisningsforskning avses konventionella sätt att evaluera undervisning inom vilken undervisningstransformering utnyttjas. Transformeringsexperimenten är småskaliga case-studyforskningar, där man inte jämför olika verksamhetsgrupper. Avsikten med undersökningen är i allmänhet att identifiera de problem, som gör produktionsprocessen svår. Frågan gäller med andra ord evaluering av produktionsproblem. I detta sammanhang kan man också söka inlärningspsykologiska samhällsrelaterade faktorer som förklarar elevernas svårigheter. Den här delen av forskningen utgör alltid den andra eller tredje delen i forskningsrapporten.

Om den slöjdpedagogiska forskningen utförs inom grundutbildningen kan den inriktas på produktionsprocesser antigen i grundskolan eller i vuxenutbildningen.

D) (Theory of teachers profession and selfdevelopment research). Om lärarkandidaten är interesserad av produktionsprocessen, såsom man väntar sig i forskningen inom grundutbildningen, kan han/hon inrikta sig antigen på slöjdpedagogik på vuxenstadiet eller på den ovan skisserade forskningen på grundskolstadiet. Såvida lärarkandidaten planerar att studera produktions-processen så att han/hon utvecklar ett produkt-projektet till ett sätt att samla en lärargrupp kring ett slöjdpedagogiskt projekt antigen i skolan eller under fritiden, kan han/hon specialisera sig på transformering av produktprojektet så att det lämpar sig för lärar-experterna. Peltonen (1993, 1995b) har behandlat grunder och uppgöljningsmetoder för lärarsamfundets själv-utveckling och därtill hörande survey-researchmetoder. Den grundläggande metoden är forskning som utförs av arbetspar (peer coaching) och kritisk forskning, där nästan alla 'första' eller konventionella lösningar ifrågasätts.

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Research on Arts and Crafts as Cultural Phenomena

Introduction

Today's theme is the cognitive consequences of work in the arts and crafts, what they mean to the development of thinking. You can consider my remarks as hypotheses, as ideas to be tested. When people think about the arts or the crafts they usulaaly think about manual work, work with their hands. We live in a western culture that has historically made a distinction between working with your hands and working with your head, we have historically made a distinction what is mental and what is emotional, between what is thoughtful and what is feelingful, between mind and soul. So the idea that there are sophisticated forms of thinking involved in the arts and in the crafts is not something that is widely accepted.

Brains are Biological, Minds are Cultural

Parents should understand the complexity of thinking that their children engage in when they are involved in painting or drawing or making music or doing dance. For many parents in the US the drawings their children do in school is decoration -- nice, but it is not necessary.

I'm trying in this address I provide a foundation in terms of human thinking that describes an idea what the arts and crafts are about educationally speaking. In a sense children come to the world mindless. The process of education can be considered a process of converting brains into minds. Education in schools is to provide a set of conditions through which human beings can appropriate resources in the culture together with their genetic predispositions in order to learn how to think in particular ways. The curriculum that schools offer provide an agenda for the development of the mind.

So when a society decides this should go into the curriculum and this should come out of it, they are in fact defining the kind of thinking skills that children will eventually acquire. A curriculum reflects social policies and tells children and adults what's important, marginal, and what's unimportant.

Those concerned with arts and crafts are concerned with creating conditions through which human beings develop their minds and through such development acquire and represent particular kinds of meaning.

What Does It Mean to Talk about Culture?

What is a culture? 1) a biological sense and 2) an anthropological sense. In a biological sense a culture is a medium for growing things. In an anthropological sense culture is a shared way of life. Schools are both: they are shared ways of life for growing minds.

What is cognition? - is a process through which the human organism becomes aware of the environment in which it lives. We live in an environment which we can sense. Our sensory system is our first information pick-up-system. One scholar put it in this way: "There is nothing in the mind that was not first in the hand." Our sensory system puts us in touch. It's the first avenue to consciousness. So *cognition has to do with awareness initially*

Some people believe that a thought is cognitive when it is linguistically mediated. I do not accept that view. *Language* is *one* of the ways in which thinking is mediated, one, but that not all of the ways. *Our consciousness, our systems of meaning, our forms of thought exceed the limits of language*. There is a difference between listening to something and hearing something., a difference between looking and seeing.

What are the Cognitive Consequences of Work in the Arts

If schools see their mission as having to do with the development of mind, with development of cognition, of thinking skills and they think about the arts and crafts as having not so much to do with thinking, then all of you are going to be marginalized in that enterprise.

The arts provide certain opportunities to learn to pay attention to relationships. Attention to relationships is not always paid attention to, particularly by children. Piaget talks about the process of centration, looking at particular things, one at a time, rather than in relationship to other qualities in some field, which is a process of *de*centration. Often it is a question of local solutions, not a matter of paying attention to relationships, which need to be cultivated.

The development in people of the ability to pay attention to relationships is an important form of cognitive development. So art teachers can help students move from a state of centration to decentration, from focusing on local solutions to focusing on contextual solutions.

How do you know when a work of craft is completed? Is there a rule about making a decision? In arithmetic there is a way to know without a doubt whether your answers are correct and that is important in mathematics. And you could say that maybe one of the important lessons that children learn in schools is how to follow rules. In arts and crafts there are no single right answers and so children have to learn how to make judgments in the absence of rules. What is that judgment based on?

- An internal focus on evaluation.

- The engagement of emotion, the cognitive use of emotion: "this feels right." Feelings, emotions serve cognitive purposes. If you are out of touch with your work, there is not much of a basis of making aesthetic choices. Aesthetic has to do with sensory, with feeling. An anesthetic puts you to sleep, kills the pain, kills the feeling. Aesthetic escalates feeling. We use these words, but we don't make the connection.

- Attention to nuance. Leo Tolstoy said: "in arts, it's the little things that count". Paying attention to subtleties. One of the important lessons that he arts and crafts teach, when they are done well, is that 'little differences make a big difference'. If you pick up a rock on the beach, you find that there is more beauty in a rock than you can discover in your lifetime. But you have to look for it and you have to know how to see it. And that is one of the things that the arts and crafts can teach, to pay attention to nuance, to see what doesn't scream at you.

  We pay a lot of attention to efficiency in our culture, but it isn't always such a terrific virtue. In fact I think that the things we like to do most efficiently, are the things that we don't like to do. "I like to take the garbage out efficiently, but I don't like to eat a great meal efficiently." This culture leaves very little time to pay attention to subtleties.

- The use of visualization. The generation of imaginative alternatives as a source of our aspiration as artists and crafts people. We can depend upon the possibility of conceiving of images that can be realized in action. Unlike language which is diachronic, visualization is synchronic. We have a capacity to create icons and see relationships at the same time. The development of our visual capacity is something that can be practiced and cultivated in the teaching of the craft and in the teaching of the arts. The ability to generate iconic images that can serve as targets that can be realized through the application of technique. Techniques are a way of working with material in order to mediate a set of ideas, in this case a visual idea. And because there are only some soft rules, the scope of possibility for our imaginative life is very wide.

Learning to Think within a Medium

If you are a musician, you have a notation system, but the notation system is employed in the possibilities of musical thought, of pattern sounds. If you are a painter, a sculptor, if you are working in textiles, you are thinking within the potentialities and constraints of that medium, of that material.

What people learn to do is to engage in a parallel processing in which their thinking is constrained by and also made possible by the medium within which they are working. That is a particular kind of thinking.

When you are working with something, even if you have a goal in your head, you may in the course of the work shift gears. The quickest road to hell in teaching is to stick to the teaching plan no matter what. In the arts capitalizing of a happy accident, something that changes, flexible purposing, remaining open to surprise is very important. Helping your students to recognize when these possibilities emerge which were not a part of a plan, but which nevertheless can be pursued, exploiting opportunities that are unintended is something that arts and crafts are about. Not rigid, not fixed. As Aristotle said: "Art loves chance."

Accepting Multiple Solutions

In schools, we are typically very often looking at outcomes that fit preset solutions. This also happens in science, when it is badly taught, when it has very little to do with real scientific purposes. One of the most important lessons in the teaching of arts and crafts is to be able to display a room full of work with the same problem and to show that there are 28 or 30 different solutions possible.

That you sensitize children to the idea that there is not one correct answer, but there are many different possibilities, is very important. It is basically a mark towards pluralism over uniformity. In some things we look for uniformity. Parents and teachers are not interested in the children being creative in spelling for example. But a teacher of arts and crafts who gets the same result from everybody may have a problem.

Learning How to Frame the World as Sources of Aesthetic Experience

Most of the time in our lives we look at things for essentially instrumental purposes. Although you may have 'seen' your house many times, you might not know what the front of your house looks like. We look at something in order to use it, which is necessary. Most of our perception is instrumental.

One of the great things about the visual arts and arts in general is that we can frame aspects of our environment whenever we like, if we choose to look at it that way. The field that you are working in has tremendous practical utility in terms of aesthetic possibilities of experience.

Meaning and knowing exceed the limits of language, not everything we can know we can say. "We know more than we can tell". Language is not the limit of our thought processes, not of our meaning systems. Some things you cannot describe, but you can make them visual.

Conclusion: Question of Transfer

Everything I have said about the different outcomes is predicated on the assumption that the arts and the crafts are well taught. When the arts and crafts are taught well in school they could serve as a model for the rest of education.

Because you have people engaged in activities in which the imagination is at work, where skills are being employed on problems that cannot be solved by appealing to rules, which require attention to nuance, which invite attention to relationships in which judgments have to be made not only by thinking, but also by feeling what seems right, the pedagogy is often on a one-to-one-basis, as you go around and talk to students individually.

What's going on is a lot more than work with material, it has to do with connections, relationships, discourse. You could do a discourse analysis, you could do an analysis on what students say and how they justify their comments, the complexity of their syntax, the use of conditionals in their speech. You might find that there is a whole lot of very sophisticated forms of cognition going on in the arts that are not going on elsewhere.

Do the acquired skills apply in areas outside the crafts? Are they applicable to in other areas of life outside the arts and crafts? This could and should be studied. If it was found that there was no transfer of these skills to other parts of life, would the crafts and the arts still be worth teaching? Those of us engaged in arts and crafts education have plenty of research to do.

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Slöjd som en del av hållbar utveckling

Abstract

Brundtland-kommissionens rapport *Our Common Future* från 1987 och miljökonferensen i Rio de Janeiro år 1992 betonade kraftigt, att den kontinuerliga tillväxtens ideologi skall ersättas med principen rörande den hållbara utvecklingen.

I artikeln behandlas först den hållbara utvecklingen från fyra synvinklar: den ekologiska, den kulturella, den sociala och den ekonomiska hållbarheten. Sedan diskuteras slöjdundervisningens möjligheter att fostra ansvarskännande konsumenter. Till sist presenteras i korthet resultaten av tre miljörelaterade studier i slöjd, som har genomförts vid lärarutbildningsinstitutionerna i Åbo och Helsingfors. Problematiken mellan den hållbara utvecklingen och slöjden diskuteras närmast ur textilslöjdens synvinkeln.

Sökord: Hållbar utveckling, slöjd, miljöundervisning, textiliers miljöeffekter.

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Inledning

Brundtland-kommissionens rapport *Our Common Future* från 1987 (WCED 1987) och miljökonferensen i Rio de Janeiro år 1992 betonade kraftigt, att den kontinuerliga tillväxtens ideologi skall ersättas med principen rörande den hållbara utvecklingen. Den hållbara utvecklingens princip är en genomgripande tanke även i den allmänna delen av grunderna för den finska grundskolans läroplan som utgavs 1994. Principen rörande den hållbara utvecklingen (sustainable development) innebär, att mänsklighetens nutida behov skall tillfredställas på ett rättvist sätt och utan att förstöra kommande generationers levnadsmöjligheter (WCED 1987).

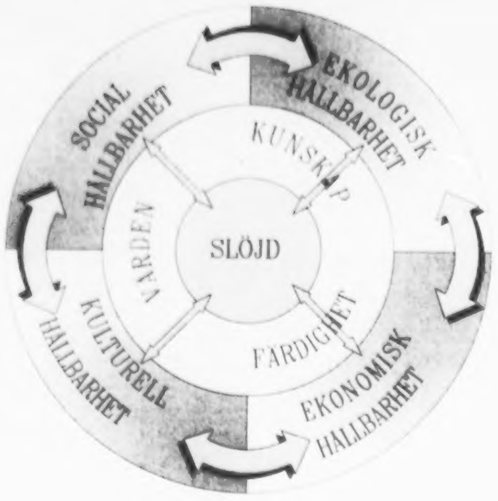
Först kommer jag att behandla den hållbara utvecklingens princip i förhållande till slöjden. Sedan diskuteras miljöundervisningens möjligheter att fostra ansvarskännande konsumenter. Till sist presenteras i korthet resultaten av tre miljörelaterade studier i slöjd, som har genomförts vid lärarutbildningsinstitutionerna i Åbo och Helsingfors.

Även om begreppet slöjd (på finska käsityö, direkt översatt handarbete) i den finska skolan innesluter både den tekniska slöjden och textilslöjden, skall jag diskutera problematiken mellan den hållbara utvecklingen och slöjden närmast ur textilslöjdens synvinkeln. Detta eftersom det forskningsarbete som jag har gjort och som jag kommer att presentera gäller miljöeffekter av textilier och kläder. Obeaktat detta kan de allmänna principerna tillämpas på slöjd i allmänhet.

Den hållbara utvecklingen i relation till slöjden

Slöjden har stort ansvar i att utbilda konsumenter som har en kritisk och ansvarsfull inställning till konsumtion i allmänhet. Det väsentliga i slöjden är ju att uppfostra genom att tillverka produkter. Produkterna har under sin livscykel en betydande påverkan på miljöns välstånd. Jag har behandlat utförligt textiliers miljöeffekter under hela deras livscykel i boken *Vihreät tekstiilit*, Gröna textilier (Suojanen 1995).

Lärarnas kunskaper om produkternas och produktframställningens miljöeffekter och lärarnas miljövänliga attityd är av stor betydelse. Slöjd som ett ämne, som uppfostrar elever genom att låta dem producera föremål, utvecklar självklart också sådana färdigheter som är nyttiga i vardagslivet. Förmågan att planlägga, tillverka, sköta, reparera och förnya, i stället för att slita och slänga är en värdefull egenskap också ur miljösynpunkt. I figur 1 åskådliggörs slöjdens förhållande till den hållbara utvecklingen. Principen har behandlats ur fyra synpunkter: den ekologiska, den kulturella, den sociala och den ekonomiska hållbarheten. Den roterande yttre cirkeln vill åskådliggöra det faktum, att de fyra områdena är i ständig växelverkan med varandra, med kunskaper, färdigheter och värden och själva slöjden, som ligger i figurens kärna.


SOCIAL HÅLLBARHET
EKOLOGISK HÅLLBARHET
KUNSKAP
VÄRDEN
SLÖJD
FÄRDIGHET
KULTURELL HÅLLBARHET
EKONOMISK HÅLLBARHET

Figur 1.

Slöjd i relation till hållbar utveckling.

Den ekologiska hållbarheten måste beaktas i all mänsklig verksamhet. De villkor, som naturens förmåga att uthärda olika påfrestningar ställer på produktion och konsumtion, måste godkännas lika självklart som man accepterar tyngdkraftens existens. Produktionen av olika varor och tjänster utnyttjar ständigt naturens resurser och belastar den med avfall. Samma gäller marknadsföringsfasen och själva konsumtionen. Skolans uppgift är att uppfostra konsumenter som är medvetna om sitt ansvar för naturen och som förstår att deras val medför konsekvenser både för produktion och marknadsföring av varor och tjänster. Det är ytterst viktigt att ta i beaktande produktens livscykel i dess helhet när man bedömer produktens miljöeffekter. Att välja miljövänliga materialer, redskap och arbetssätt i slöjden, gör det lättare att bli medveten om hur en människa kan påverka naturens välstånd.

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Det är viktigt att slöjdaren tar en ansvarsfull inställning till miljön och att han eller hon värdesätter det estetiska i naturen. Detta kan vara en inspirationskälla för många slöjdarbeten.

Den kulturella hållbarheten förutsätter att utveckligen harmonierar med folkets kultur och värden. Den kulturellt hållbara utvecklingen bygger på folkets egen kulturtradition. En nation som inte har kännedom om sin tradition, klarar sig inte i den internationella världen. I Finland är slöjd en del av vår nationella kultur, och dess styrka ligger fortfarande i starkt kunnande och i personlig och egenartad finsk design.

Den sociala hållbarheten förutsätter att individens och samfundets förmåga att bemästra sitt eget liv förbättras. Ur global synvinkel är den sociala hållbarheten en livsviktig sak för framtiden. Den materiella konsumtionen är mycket ojämnt fördelad mellan industriländerna och utvecklingsländerna. En verklig fara ligger i det att en stor del av jordens naturresurser används till produktion av varor, som inte tillfredsställer människornas grundbehov, utan som är riktade till en köpkraftig minoritet. Det har sagts att vi inte mera producerar för att leva, utan för att upprätthålla produktion (Holm 1991, 29). Detta har varit aktuellt, speciellt i Finland, när man diskuterar möjligheten att öka konsumtionen på hemmamarknaden för att kunna minska den stora arbeslösheten.

Ett stort problem ur den sociala hållbarhetens synvikel är frågan om textilindustrin i många sådana utvecklingsländer där barn och kvinnor arbetar i förhållanden som inte mera tillåts i västliga industriländer. Många frågar ifall det är rätt att ett barn skall offra sin barndom och sin möjlighet till skolgång för att vi i rika länder skall kunna köpa våra kläder så billigt som möjligt? På lokal nivå kan den sociala hållbarheten befrämjas genom att utveckla arbetsförhållanden och arbetsklimatet.

Den ekonomiska hållbarheten förutsätter att utvecklingen vilar på en ekonomiskt hållbar grund. Utvecklingen av effektivare teknologi gör det möjligt att producera mera med mindre naturresurser. Effektiv produktion och hållbar utveckling kan således betraktas som två olika dimensioner av en och samma sak. Återvinning av material och energi är inom olika industrigrenar både en ekonomisk fördel och samtidigt ett starkt argument i marknadsföringen.

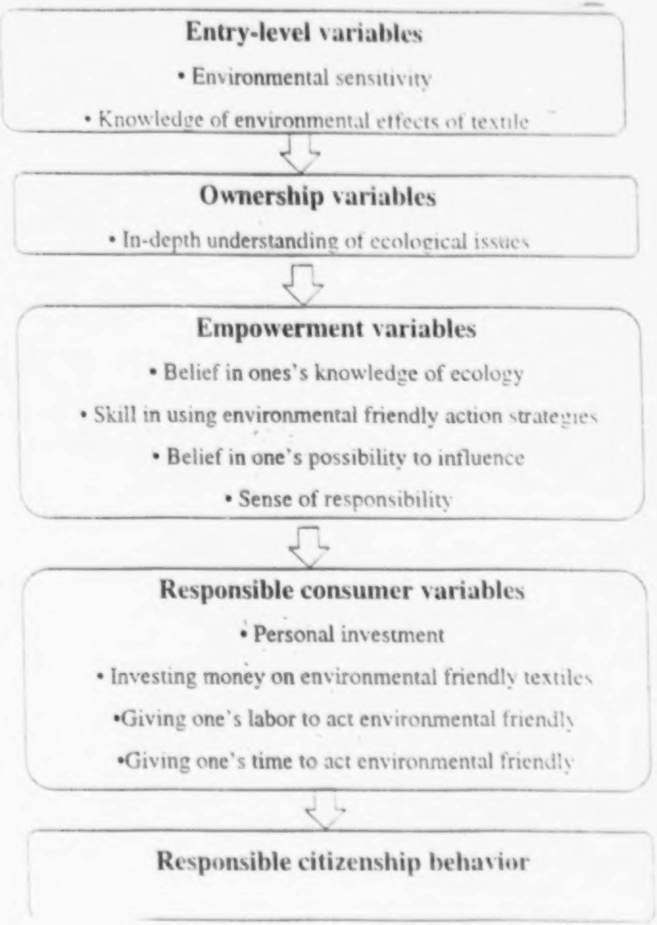
Ekonomiska aspekter har tradiotionellt bildat en fast grund för slöjdarbeten. Sparsamhet i materialförbrukningen och rationalitet i formgivning, tillverkning och användning av slöjdprodukter har ofta varit en självklar sak åtminstone i finsk slöjd.

Slöjdundervisning har en möjlighet att påverka elevernas eller studerandens värden och attityder så att konsumenterna i framtiden blir mera medvetna om de miljöeffekter deras beslut och verksamhet har. Genom att planlägga och tillverka föremål, inhämtar man även färdigheter som är till stor hjälp när man skall bete sig miljövänligt.

Slöjdens möjlighet att uppfostra kritiska konsumenter

För att den hållbara utvecklingen skall realiseras behövs en förändring i människornas tankemodeller och beteende. Till detta strävar man genom miljöuppfostran på alla utbildningsnivåer. Gamla modeller av miljöfostran bygger på ett system där man antar att kunskap om miljöfrågor påverkar människornas attityder eller miljömedvetande, som i sin tur leder till en önskad förändring i beteendet. Enligt många forskningsresultat (Hungerford & Volk 1990) har denna modell tyvärr inte varit effektiv i verkligheten. Hungerford och Volk har presenterat en modell som består av tre olika grupper av variabler, som bildar grunden till ett ansvarsfullt medborgarbeteende (Citizenship Behavior) där naturens välstånd tas i beaktande. Figur 2 presenterar en modell som jag har bearbetat enligt Hungerford & Volk och anpassat till textilslöjden. De första variablerna, känslighet för miljön och ekologisk kunskap, kallas *utgångspunkts variabler* (Entry-level variables). Det viktigaste enligt Hungerford & Volk är att studeranden genom sin egen erfarenhet av naturen har upplevt den som värd att skydda. Först efter den här upplevelsefasen har man nytta av ekologisk faktakunskap, t.ex. av textiliers miljöpåverkan. En svensk fysiker Bodil Jönsson och läraren Per Wickenberg har beskrivit den här saken utmärkt i deras bok På goda grunder (1992). De skriver att de tror på bara en kraft i livet, och det är kärleken: "(G)jord att älska, vär(l)d att försvara."

Den andra variabel gruppen bildas av faktorer som har med *personlig betydelse* (Ownership variables) att göra. Till denna grupp räknas faktorn för en holistisk förståelse av miljön och faktorn för en personlig satsning på miljön. Studeranden skall lära sig att betrakta sin verksamhet och sitt beteende i en vid kontext. Att bedöma textiliers miljöpåverkan under hela deras livscykel är ett exempel på holistisk förståelse. Det är jämförelsevis lätt att på principiell nivå godkänna tanken om hållbar utveckling, men det är betydligt svårare att själv satsa på den. Satsning på miljön kan ske t.ex. genom att vara beredd att betala något mera om textilier som är miljövänliga eller genom att bemöda sig att sköta sina kläder för att förlänga deras livstid.


Entry-level variables
• Environmental sensitivity
• Knowledge of environmental effects of textile
Ownership variables
• In-depth understanding of ecological issues
Empowerment variables
• Belief in ones's knowledge of ecology
• Skill in using environmental friendly action strategies
• Belief in one's possibility to influence
• Sense of responsibility
Responsible consumer variables
• Personal investment
• Investing money on environmental friendly textiles
•Giving one's labor to act environmental friendly
•Giving one's time to act environmental friendly
Responsible citizenship behavior

Figur 2.

En modell för ansvarsfullt konsumentbeteende (bearbetad efter Hungerford & Volk 1990).

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Den tredje gruppen bildas av variabler som har med individens *påverkningsmöjligheter* att göra. En konsument skall lita på sina kunskaper om miljöfrågor och han eller hon skall också lita på sin förmåga att inneha sådana färdigheter att man kan förhandla på ett miljövänligt sätt. Man skall även ha tillit till att man kan påverka genom sina beslut och genom sitt beteende som konsument. En förutsättning för människans ansvarskänsla för miljön är att man tror på sina möjligheter att påverka. Ansvarskänsla för miljövänligt beteende räknas också till denna kategori.

Alla dessa ovannämnda faktorer är en förutsättning för ett förändrat och *ansvarsfullt konsumentbeteende* som kommer till synes i människans vilja att göra personliga satsningar på miljön. Det gäller att satsa både pengar, sin arbetstid och möda på ett beteende som tar miljöfrågor i beaktande.

Om man vill uppfostra miljömedvetna konsumenter, som även vill bete sig miljövänligt, skall skolan skapa sådana inlärningsförhållanden som gör att studeranden känslomässigt upplever naturen som värdefull. På denna grund kan man bygga ett system av miljökunskap, som hjälper studeranden att förstå sitt beteende som konsumenter ur miljösynpunkt. Studeranden skall också skaffa sig beredskap att genom sitt konsumentbeteende kunna påverka framställningen av miljövänliga produkter.

Forskning om lärarstuderandens inställning till en hållbar utveckling

Under åren 1993-1995 har jag forskat i lärarstuderandens attityder till den hållbara utvecklingen både hos klasslärarstuderanden vid Åbo universitet och hos textillärarstuderanden vid Helsingfors universitet. Jag skall presentera forskningsprojektet benämnt *Kläder, vår kroppsnära miljö,* vilket hittills har framskridit i tre skeden.

Projektets första skede startades 1993 vid lärarutbildningsinstitutionen i Åbo genom att kartlägga studerandens miljöattityder efter en kurs i beklädnad. I projektet deltog en grundkurs (N=55) och en specialiseringskurs (N=9) i textilslöjd. Som referensgrupp användes sista årets studeranden (N=44) från en yrkesskola i Åbo, vilka antogs representera ett bättre kunnande och ett mera professionellt synsätt på kläder.

Av forskningsresultaten kan konstateras, att den allmänna opinionen, som rör sig mera på global nivå, var relativt positiv. 83 % av alla studeranden ansåg att miljöaspekten borde tas mera i beaktande än dittills. På lokal nivå, dvs. i vardagliga köpbeslut, inverkar miljöeffekter inte i samma grad. Bara 53 % av studerandena var villiga att betala mera för miljövänliga kläder. Till en del kan detta bero på att många var osäkra beträffande textiliers miljöeffekter. Kriterier för miljövänliga kläder efterlystes också. Vid bedömningen av studerandenas åsikter skall man komma ihåg att kriterierna för miljövänliga textilier (t.ex. för det nordkiska miljömärket) inte var klara vid den tidpunkt då undersökningen genomfördes.

Studerandenas inställning till en hållbar utveckling var nästan den samma när det gällde självsydda som för färdiga plagg. Minst betydelsefulla var enligt studerandenas svar de påståenden som berörde den sociala och ekologiska hållbarheten. Även om detta resultat kan vara förståeligt med tanke på studerandens livssituation, kan attityderna även spegla en viss oförmåga att leva sig in i andra människors liv och kultur. Alla grupper ansåg det vara mest betydelsefullt att klädernas pris är förmånligt och att plaggen är tidlösa och användbara vid många tillfällen. Påståenden som ligger närmast ens eget liv erkändes påverka mest i de beslut som studerandena fattade. Studerandena från yrkesskolan betonade något mera den kulturella hållbarheten, än grundkursstuderandena i lärarutbildningen, men något mindre än studeranden på specialiseringskursen.

Ett av forskningsproblemen gällde yrkeskunnighetens betydelse för studerandenas miljöattityd. Man kunde anta att djupare ämnesstudier också skulle medföra bättre förmåga att analysera textiliers miljöeffekter vid livscykelns olika skeden, och att bättre kunskap skulle leda till positivare miljöattityd. Enligt resultaten från denna undersökning stämmer detta antagande inte. Studerandena i klasslärarutbildningen hade i allmänhet en positivare inställning till miljöfrågor än studerandena i yrkesskolan. För studerandena i yrkesskolan spelade miljöfrågorna en mindre betydelsefull roll genom hela undersökningen. Detta resultat stöds av tidigare forskningsresultat, som t.ex. Hungerford & Volk (1990) har framhållit, där ökad kunskap inte har lett till förändrat beteende.

Projektets andra skede genomfördes vid Helsingfors universitet under åren 1993-1994. Syftet var att undersöka på vilken reflektionsnivå textillärarstuderanden opererar när de planlägger undervisning av arbetsområden inom beklädnad. Deltagare i undersökningen var första och andra studieårets studeranden (N=81), som skulle påbörja ett beklädnadsarbetsområde. Som forskningsmetod tillämpades s.k. passiv role-playing, där studerandena fick agera inom en fiktiv episod som behandlade sociala förhållanden i Finland, t.ex. arbetslöshet och privat konsumtion. De centrala tankarna i episoden var den hållbara utvecklingen och den kontinuerliga tillväxten samt Finlands medlemskap eller icke-medlemskap i EU. Studerandena fick i uppdrag att inbilla sig hur världen ser ut år 2010, då de som textillärare planerar en studieresa med miljötema till Centraleuropa. Studerandena skulle beskriva vilka spörsmål de skulle behandla med sina elever, när de planerar ett arbetsområde inom beklädnad. Episoden förutsatte att eleverna själva skulle tillverka sin resegarderob vilken skulle uttrycka resans tema. Berättelserna analyserades med hjälp av en kvalitativ innehållsanalys och resultaten klassificerades på tre reflektionsnivåer, den tekniska, den praktiska och den kritiska reflektionsnivån. På den tekniska reflektionsnivån klassificerades svar som enbart behandlade planeringen och tillverkningen av kläder utan att ta i beaktande resans tema eller syfte. I berättelserna på den kritiska nivån diskuterades ytterligare förhållandet mellan ökning eller minskning av privatkonsumtionen och arbetslösheten i västliga industriländer samt den ständigt ökande konsumtionens miljöpåverkningar m.m.

Av alla studeranden klassificerades 28 % motsvara en teknisk reflektionsnivå och 36 % en praktisk och kritisk nivå. Resultaten visar att förmågan att betrakta slöjdundervisning i en mera omfattande kontext än enbart som tillverkning av förmål inte är lätt för textillärarstuderanden. Enligt forskningsresultaten var det inte en betydande skillnad mellan första och andra studieårets studeranden, vilket ger anledning även till självkritik inom textillärarutbildningen.

Det tredje skedet av miljö-projektet *Kläder, vår kroppsnära miljö* utfördes 1994. Huvudsyftet med undersökningen var att klarlägga textillärar-studerandens (N=56) medvetenhet rörande textiliers miljöeffekter och deras färdighet till ansvarsfullt beteende både som konsumenter och som designers och tillverkare av textilprodukter.

Studien genomfördes i form av en opinionsndersökning. Frågeformulären innehöll påståenden från alla fyra variabelgrupper, som är presenterade i figur 2.

Forskningsresultaten visar även i denna undersökning en positiv inställning till miljöfrågor på generell nivå. Studerandena visade en relativt stark sensitivitet för naturen. De flesta tyckte att ren natur är ett av grundvärdena i livet och även en viktig inspirationskälla i handarbete. Kännedomen om textiliers miljöeffekter, den andra delen av de utgångspunktsvariabler som presenterats i figur 2, var däremot inte så god. Likaså var fallet med variabeln som behandlar den holistiska förståelsen av miljöfrågor, t.ex. bedömning av miljöeffekter under produktens hela livscykel. Textillärarstuderanden litade inte på sina kunskaper om miljöspörsmål, men däremot visade de stark tillit till att de har förmåga att handla på ett miljövänligt sätt. Tron på individens möjligheter att påverka ekologiska förhållanden genom sitt beteende är ytterst viktig när det gäller att ändra sitt beteendemönster. De var också beredda att offra arbete och tid när det gällde att välja miljöbesparande förfaringssätt. Deras förtroende för konsumentens möjligheter att påverka var också stark.

Trots att de variabler, som enligt Hungerford & Volk är förutsättningar för ansvarsfullt konsumentbeteende, fick åtminstorne delvis ganska höga värden i undersökningen, kan vi inte vara fullt nöjda med textillärarstuderandenas beredskap till ansvarsfullt beteende, speciellt när det gäller ansvarstagande på generell nivå. Även denna undersökning visar tydligt att det vållar svårigheter för de finska studerandena att förstå principen gällande den hållbara utvecklingen i sin helhet.

Sammanfattningsvis kan man konstatera att studerandena visar en klart positiv inställning till en hållbar utveckling på generell nivå, men är inte lika färdiga att tillägna sig ett miljövänligt beteendemönster på konkret nivå. Detta är en tydlig utmaning för lärarutbildningen. Hur skall vi utbilda unga studeranden så att de får en djupare förståelse för den hållbara utvecklingens princip.

Textillärarutbildningen vid Helsingfors universitet är medveten om det ansvar vi har i att utbilda sådana textillärare som själva känner till principen gällande den hållbara utvecklingen och som förstår vad det betyder i deras verksamhet som formgivare och tillverkare av textilprodukter. Vi har även uppmuntrat studeranden att välja miljöfrågor som tema i deras magisteravhandlingar.

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The Psychology of Image Formation: Subject and Object Dimensions

Abstract

A psycho-educational analysis of the image formation process in schooling is presented. Craft teachers should have a knowledge base to guide them in the design and conduct of teaching activities to facilitate the creative formation of new images by students. It is argued here that a new approach, or attitude will be useful in building such a knowledge base. The knowledge base could serve as an 'intellectual tool' to support a teacher's creativity, in both the preparation and the execution stages of teaching. The general approach known as the 'formation of mental actions, images, and conceptions' which has been defined by Piotr Galperin and developed by his followers, is presented here as an example of such an 'intellectual tool'

Keywords: Psycho-educational analysis, image formation, teacher's intellectual tool, mental actions, functional development

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The Psychology of Image Formation: Subject and Object Dimensions

There are two separate focuses in the contemporary psychological consideration of human images: 1) a focus on the content of the image, such as what objects (or their elements), events, processes are perceived, remembered, or imagined by the subject; and 2) a focus on the individual, or subject, to explain differences in how individuals perceive, remember, or imagine the specific content of the image. The first focus may be related to object dimensions, while the second focus can be related to subject dimensions.

However there is also a third possibility, one which involves a combined and interrelated consideration of both types of dimensions simultaneously. This is a psycho-educational focus or approach. Within a psycho-educational point of view it is equally important from the both to know both what is presented in the subject's mind and how the presented content came into appearance in this subject's mind and not in another's. This is therefore a problem of defining the psychological conditions necessary for image formation through an integration of both the object and subject dimensions. The psychological conditions should be defined explicitly so that is possible to state the conditions that should be provided by a psychologist, teacher, trainer or other person in order to facilitate processes such as a student's perception, recall, and imagination of some specific content. It is therefore very clear that the current field of craft education is one of those branches of educational science which requires such a knowledge base to be available in a form that can be operationalized (see, for example, Kääriäinen 1996; Suojanen 1996; Uotila 1996).

What does an art teacher or craft teacher (or teacher trainer) need to know about the process of image formation? To begin it is obvious that human beings differ from one another in capabilities; yet it is equally recognized that a teacher can play a role in facilitating a student's development of those capabilities. To play such a role effectively, however, a teacher has to have a knowledge base that will assist him/her in designing and then conducting effective teaching activity following an the initial formation of a new image by a student.

A new approach, or attitude, would be useful in building such a knowledge base. It could serve as an 'intellectual tool' to support the creative process of the teacher both in preparing and carrying out instruction. This tool would not be any type of 'prescription'; such prescriptions are not possible within teaching in general, and especially for teaching within the particular disciplines of art and craft. Rather, this tool would be a new, scientifically based way of thinking about the teaching/learning processes.

One example of an approach in which the above requirements for a teacher's intellectual tool are met, and met in a sufficiently complete, sophisticated, and operationalized manner, is the approach described by Galperin (e.g. 1969, 1989, 1992) and known as the 'formation of mental actions, images, and conceptions' approach. This approach is the continuation of a trend in developmental and learning psychology which was started by Vygotsky (1978). However, Galperin's approach introduces the following new elements: a) the approach considers the nature of human mental life, its coming into existence, and its further development, in the context of philogenetical, anthropogenetical, and ontogenetical processes; and, b) it considers the system of psychological conditions which enable knowledge and skills formation with the desired and prescribed outcomes. According to Galperin's approach, mental images are considered to be a part of a unity with, and inseparably linked with, mental actions. Mental actions and images are considered to be "the cornerstone of the whole diverse content of what we learn at school and in practical life" (Galperin 1989, 66), and therefore the most direct object of teaching.

According to Galperin, mental action is a functional structure that is continually being formed throughout an individual's lifetime. Using mental actions, the human being plans, regulates, and controls his/her performances by means of socially established patterns, standards and evaluations. Mental actions can and should be considered as the result of a complex, multimodal transformation of initially external processes performed by means of certain tools. In other words, from a nomothetical point of view, mental actions and images are the results of internalization of initially external processes (Galperin 1969).

Mental actions and images reflect and are the product of both human needs and the demands and conditions of the objective situation. They can, therefore, be characterized by sets of primary and secondary properties. The following properties are considered to be primary: a) the composition of the action's objective content); b) the extent of differentiation of essential elements from inessential elements within the problem situation; c) the degree of internalization of the action; and, d) 'energetic' (speed and enforcement) parameters. Secondary properties are: a) reasonability; b) generalizability; c) consciousness; and, d) criticism.

The secondary properties are the result of specific combinations of primary properties. Both primary and secondary properties represent socially estimated and evaluated qualities of human activities, and refer to any sort of activity, whether individual or collective, material or mental.

The final values of these properties determine the specific action and/or image formed. Galperin considered the values of the properties to be the direct outcomes of action formation conditions. He therefore defined a system of conditions that ensure and guarantee the achievement of prescribed, desired properties of action and image; this system is termed the "System of planned, stage-by-stage formation of mental actions", or the PSFMA system (Galperin 1989). The PSFMA system includes four subsystems: 1) the conditions that ensure adequate motivation for the subject's mastery of the action; 2) the conditions that provide for the necessary orientation toward the action ("orientation basis of action" by Galperin); 3) the conditions that support the consecutive transformations of the intermediate forms of action (materialized, verbal) and the final, end-transformation into the mental plan; and, 4) the conditions for cultivating, or "refining through practice", the desired properties of an action (Galperin, 1989).

Each subsystem contains a detailed description of the related psychological conditions, which include the motivation and operational areas of human activity. The first subsystem (conditions for motivation) makes explicit a number of links and connections between learning motivation and the dynamics of the internalization processes. The second subsystem (conditions for orientation to an action) contains a description of hierarchically organized components that offers a framework for the formation of the concrete action and image. These components in the framework are representations of: a) final and intermediate products of action and image; b) a general plan and a plan of intermediate products to be achieved; and, c) orientation and executive tools to achieve those products. The second subsystem also provides a learner with necessary conditions for adequate orientation to the structure of a problem situation. Such an orientation includes: 1) representation of the final product of an action; 2) representation of intermediate products; 3) representation of the general plan for achievement of the final product; 4) representation of plans for achievement of the intermediate products; 5) representation of tools used to achieve those products (both orientation and execution tools); 6) representation of the plan and tools for control and correction of actions as they are being executed; and, 7) representation of the entire structure of a complete orientation basis. Such a scheme is not a prescription, or an 'algorithm' for solution. Instead, it provides a learner with a tool for his/her orientation toward both the objective content of the action and image being formed and toward the operations needed to handle this content in accordance with specific learning aims and goals. The construction of an effective orientation basis is the central creative task for the participants in the learning/teaching interaction.

The third subsystem represents the stages of internalization, or transformation of the action into a mental plan. Galperin has introduced six stages of internalization as the fundamental basis of any learning process: Stage 1 is the formation of the motivation base of action; Stage 2 is the formation of the orientation base of action; Stage 3 is the material (materialized) form of action; Stage 4 is the external socialized verbal form of action (overt speech); Stage 5 is the internal verbal form of action (covert speech); and, Stage 6 is the mental action formation and final change, characterized by the action's automatization.

The last, and fourth, subsystem contains a description of the three basic problem situation types and of their combination and presentation during the formation processes. Three basic types are distinguished: a) the 'psychological' type, in which the conceptual and perceptual or visible features of a problem situation are contraposed; b) the 'logical' type in which necessary and essential parameters are contrasted with unnecessary, or 'noisy', parameters of a problem situation; and, c) the 'object' type, in which all of the possible forms of a specific action and object content are considered. Different problem types are offered in a sequence which is meaningful for learners. If the four subsystems harmoniously work together, they produce an action with the desired primary and secondary properties.

Each specific case of image (or action) formation in schooling may be considered to contain one or another set of the conditions mentioned. It is up to the teacher to choose (create, collect, etc.) the most adequate conditions to provide the students with image and action formation.

The heterogeneous structure of a real learner's orientation in the action problem field, in the instructional situation as a whole, and in learner/

teacher and learner/learner interactions together with the non-linear character of action orientation formation (see: Podolskij 1990, 1991, 1993) do not allow for the application of any constant, or 'absolute' PSFMA procedure or PSFMA-oriented instructional technology. A sequence of stages, the general structure of the orientation basis of action and other 'cornerstone' elements of the planned stage-by-stage formation system should be considered as the most complete, normative and nomothetic description of the process of forming human mental actions (Galperin 1992). When examing empirical evidence, it is very hard to discover all of the elements of this system simultaneously since, for example, certain elements of the orientation basis are known to learners, and most of the students (excluding special cases) are rather experienced in mastering the verbal and mental plans. This is why some of the elements of the PSFMA system of conditions may not appear consistently or may seem completely absent. This is a crucial point that must be recognized by any teachers who try to implement the approach.

In emphasizing the nomothetically orienting role of the general PSFMA system successful application of the PSFMA statements does not imply a literal reproducing of some abstract general procedure. Rather, it refers to the creative design of a system of necessary and sufficient psychological conditions for the specific instructional situation. The elaboration of such a procedure occupies an intermediate position between the fundamental psychological knowledge and the real process of schooling (Podolskij 1991, 1993). This intermediate position tries to take into account and to link the general laws and principles involved in the formation of formation of learners' mental activities with the specific characteristics of learners, and characteristics of the schooling situation. This intermediate 'application' position is operationalized in the consecutive elaboration of three models which are needed for the instructional design. These are: the psychological, the psychological-pedagogical, and the methodological, or technological models (Podolskij 1991). The psychological model includes:

a) a description of the knowledge and skills to be acquired in terms of the learner's mental actions, images and concepts; b) a description of the macro-and micro- structure of the learner's orientation as a base for a new mental action and image to be formed; c) a description of age-related and individual characteristics of students that are relevant to instruction and schooling; d) a description of the specific system of psychological conditions needed for the formation of the action.

The main function of the psychological-pedagogical model is the projection of the demands of the psychological model onto the specific objective and subjective conditions of teaching: the organization of instructional activities and the distribution of different organizational forms during a lesson or over a sequence of lessons; proportion of in-class versus homework activities, and of individual versus small group and whole-class forms of learning activities; the use of available technical aids of teaching (including computers).

The last, methodological, or technological model of the instructional situation includes a detailed description of the process of teaching, distributed between units of definite form and time, with a precise description of the goal of each unit and the means to achieve those goals. It also includes a complete list of teaching documentation: schemes, different kinds and types of both learning and checking tasks, descriptions of the order of application of technical aids and a number of other materials specified for different types and kinds of schooling or instructional situations. The methodological model looks like the traditional well-done 'teacher's lesson plan'; however, one has to remember that this model is based upon the considerations outlined by the psychological and the psychological-pedagogical model. Considering the three-model framework it is again necessary to emphasize that this is an intellectual tool. It is not an algorithm which prescribes 'how to act'. This framework, if used in an appropriate and sophisticated way, gives a teacher the ability to orient, to plan, to control him(her)self completely in designing, arranging and carrying out different instructional activities.

To conclude it is emphasized here that the students' image formation, together with the related formation of mental actions, represents an essential part of art and craft education. As such, the process has a very complex, heterogeneous nature and it is suggested here that art and craft teachers can benefit from the use of Galperin's approach to image formation, mental actions and concept formations in developing their instruction. That is, it can offer a useful perspective and serve as an 'Intellectual Tool' for teachers by providing a systematic description of the crucial psychological mechanisms standing behind of action and image formation. Such an approach will not replace concrete creative teaching activity or 'teach the teachers what and how to teach'. Rather the teacher is expected to creatively use this Intellectual Tool or perspective to both develop and enrich his/her work with students.

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Arne Klingborg

Kunskap genom handen

I början av 1950-talet var jag som ung konstnär och pappa indragen i ett pedagogiskt projekt. Tillsammans med några lärare som hade praktiserat den så kallade waldorfpedagogiken gällde det att bygga upp en ny skola i Stockholm. Med några eldsjälar i spetsen uppstod vartefter en liten grupp som studerade Rudolf Steiners ideer och råd från tiden då han grundade den första Waldorfskolan 1919 i Stuttgart. Det var ju omedelbart efter det första världskrigets slut i ett fullständigt politiskt och ekonomiskt kaos i Europa.

Nu på 50-talet befann vi oss i en annan situation, som också hade sin dramatik efter andra världskrigets slut, men många pedagogiska frågor från 1919 upplevde vi med ny aktualitet. En fråga som fängslade mig hos Rudolf Steiner var hur han vid sidan av den mer intellektuella undervisningen betonade konstens roll i skolan, hur han talade om att hela pedagogiken måste betraktas som en konst. Han talade om undervisnings-*konsten*.

Själv hade jag under 1920-talet och i början av 30-talet varit elev i en annan spännande skola. Det var Viggbyholmsskolan norr om Stockholm, grundad av Per Sundberg, en alltför litet känd reformpedagog i Sverige. Per Sundberg hade tagit upp många ideer från engelsk reformpedagogik men hela skolan genomströmmades också av ett konstnärligt sinnelag, som stammade från Carl Malmsten, något som märktes ända in i den enkla inredningen. Per Sundberg hade tidigare tillsammans med Carl Malmsten grundat Olofskolan i Stockholm. Då den primitiva slöjdsalen blivit till i ett gammalt stall slöjdade vi självklart efter Carl Malmstens modeller.

Ett annat pedagogiskt initiativ lärde jag känna något senare, samtidigt som jag studerade på Konstakademin i Stockholm. Det var en pedagogisk verksamhet för utvecklingsstörda barn, som började i Järna söder om Stockholm 1935. Här mötte jag en variant av walldorfpedagogiken, anpassad för barn med svårigheter. Verksamheten där berörde mig starkt, inte minst konstens roll och hantverkets roll i ett terapeutiskt sammanhang.

Under den tiden, då jag kämpade för att finna mitt eget konstnärliga uttryck, förberedde jag mig samtidigt för att kunna genomföra några uppgifter i den nya skolan. I mina studier av Rudolf Steiners pedagogik läste jag följande:

> *"Vi måste vara uppmärksamma på den fruktbara växelverkan som uppstår när praktiskt konstnärligt arbete på olika sätt integrerar med intellektuellt arbete. Det rör sig om en konstnärlig verksamhet i vidaste mening, som är så beskaffad att den bidrar till att göra tänkandet levande i vuxen ålder, så att det vi då gör som vuxna har kraft att verka socialt. Det innebär att den konstnärliga verksamheten i skolan kan upplevas som något meningsfullt. En sådan konstnärlig verksamhet blir särskilt tydlig i konsthantverket."*

Här kände jag igen något som verkade inspirerande. Var det möjligt att en växelverkan mellan intellektuellt arbete och praktiskt konstnärligt skapande i skolan skulle kunna väcka och utveckla ett *levande tänkande* och *social kreativitet* som vuxen? Den skapande verksamheten var här ställd in i ett stort samhällsperspektiv.

Var det formuleringar som syftade mot ett vidgat konstbegrepp, som också innefattade livets konst? Var det formuleringar som berörde den stora frågan om den forskande skapande människan i allmänhet?

När det gäller kunskapandet i pedagogiska sammanhang är det viktigt att vi är uppmärksamma på hur vi före skoltiden kunskapar eller gör erfarenheter genom lek och efterhärmning, genom att möta eller stöta samman med olika material och händelser. Tänker vi efter, så är det en ofantlig mångfald av erfarenheter, kunskaper som vi erövrar som små barn.

Här rör det sig inte bara om kunskaper genom handen, utan vi kunskapar med hela vår kropp genom alla sinnen. Vi utvecklar en slags 'erfarenhetskunskaper' som varefter leder till begreppsbildning. Erfarenheterna fogas i sina rätta sammanhang genom tänkande verksamhet och medveten kunskap uppstår. Men det börjar med den skapande verksamheten i leken. Så utvecklar vi som barn ett förhållande till oss själva och till livet.

Som lärare ger Rudolf Steiner här pedagogiska råd:

> *"Det gäller att vara vaksam på hur leken kan ledas över till förmågan att gestalta något konstnärligt, något konstnärligt, som också är förbundet med något praktiskt, till exempel: från att börja med att göra leksaker till att senare göra saker som man kan använda*

> *praktiskt. På så sätt kan man leda över det konstnärliga till det hantverksmässiga, så att barnen lär sig att göra husgeråd och enkla verktyg som de själva kan använda. -- I våra verkstäder i skolan kan man se hur både pojkar och flickor med stor begeistring tillverkar sina verktyg och hur de gläder sig åt att dessa kan användas i livet.*
>
> *På detta sätt belivar man alla instinkter så att man utvecklar ett förhållande till livet. Vi märker hur å ena sidan sinnet för det praktiska utbildas och å andra sidan hur sinnet för det vackra, för konsten växer fram."* (Rudolf Steiner ur ett föredrag i Ilkley, England, 1923)

En liknande pedagogisk erfarenhet uttrycker Carl Malmsten, en hantverkets mästare och pedagog på sitt sätt:

> *"Låt människorna alltifrån tidig ålder snickra, väva, måla, knåda i lera, bygga, musicera, spela teater, inreda ungdomsgårdar och slöjda möbler till sin egen skola och till eget hem, släpp lös hela kopplet av bundna andar, som vill ut och skapa det som gläder själen och som är vackert, nyttigt, färgrikt, enkelt, torftigt, praktiskt, efter var och ens näbb och fason.*
>
> *Bygga hus, lägga ut marker, lär upp folk som kan ta hand om alla som vill omfamna livet med ett verktyg i handen, kvintilerande på ett instrument eller engagerade på en scen, och du har i hjärtat lagt en grund till en ny folklig konst."*

Carl Malmsten var inte någon filosof, teoretiker, systematiker eller utbildad psykolog eller pedagog. Hans pedagogiska uppslag springer fram ur helt konkreta upplevelser och inte ur några inlärda teorier. Man behöver bara följa honom när han upplever att han har två händer. Han berättar hur han efter 13 års skolgång "och dess surrogatnäring av heterogent bokvetande och obekant med rejält arbete" en dag fann sig stående vid en hyvelbänk och upptäckte sina *händer* och vad de kunde ge av trygghet och arbetsglädje.

Eller när han beskriver vad som sker när man slöjdar:

> *"Slöjden samlar ihop hela människan. Ena handen håller fast ämnet, den andra griper stadigt tag i verktyget. Ögat vakar skarpt över att det förs rätt. Musklerna spänns i kraftiga tag och hela kroppen arbetar med. Viljan leder och planlägger i förbund med fantasin det verk som skall tjäna ett bestämt syfte, och arbetet växer fram mot fullbordan i en takt som är naturlig för var och en."*

Carl Malmsten ser ett mål i den pedagogiska verksamheten där kunskapen genom handen spelar en stor roll. Det gäller att väcka den skapande människan, den *inre ledaren* som ur fri vilja också är kreativ i de sociala sammanhangen.

Naturen har

> *"inte bara utrustat oss med huvud utan också med kropp och händer. Den har också gett oss hjärta och känslor och en spontan livsvilja. Skall människoplantan växa till mognad och självbehärskning, måste*

> *de grundelement som danar hennes väsen under uppväxtåren få träda i organisk växelverkan med varandra. Barnen måste få rota i verklighetens mylla, gräva i jorden i egen täppa och skörda frukterna av sitt eget arbete. - Färger, pennor och papper skall ge barnens upplevelser gestalt och klarhet. Och vad de läser om i böcker skall komma dem nära genom att handen får samla och forma och bilda det som blotta läsandet inte gör tillräckligt levande och gripbart."*

Här möter vi en pedagog och konstnär som talar ur livserfarenhet. Han utvecklar tankarna om målen vidare:

> *"Vi vill (i vår skola) hos varje ung människa väcka den inre ledaren genom att hon i arbete och självutveckling finner sig själv och i allt högre grad lär känna måttet av sina krafter. Härigenom vinner hon en fast inre grund för att orientera sig i livet, i samarbete med andra fylla sin uppgift och förverkliga ett livsmål, i en splittrad tid bevara sin frihet och veta att välja bland den störtflod av materiella och andliga gåvor som en massproducerande tid slungar ut över människorna."*

Hos Carl Malsten möter vi liknande tankar som hos Rudolf Steiner, nämligen erfarenheten av hur kunskap genom handen kan leda till social kreativitet.

Har man själv under en längre tid prövat dessa uppslag så skulle man, även om man ibland måste använda sig av det talade eller skrivna ordet, helst vilja avlösa framställningen genom ord och föra in läsaren eller åhöraren i en miljö som direkt bekräftar vad det rör sig om. Helst skulle man vilja stiga in i en verkstad och möta arbetsplatsen som inspirationskälla med alla sina dofter och ljud. Snickeriverkstaden med doften av olika träslag och ljudet från såg och hyvel, textilkammaren med de rytmiska slagen från vävstolarna, keramikverkstaden med doften av fuktig lera och smedjan med eld och glödande järn och slagen mot städet - och så alla arbetande ungdomar. Här har vi arbetsplatser där lärarnas kunnighet smittar av sig på eleverna. Det är arbetsplatser där man kan skola fantasikrafterna genom att forma ting motsvarande materialens möjligheter och tingens praktiska användning.

Men något som kan vara viktigt och stimulerande i arbetet rör inte bara sakernas praktiska funktion i allmänhet utan vem de är avsedda för. Först kan det gälla att göra något till mig själv, något jag behöver, till exempel ett verktyg. Sedan kan det gälla att göra något att ge bort, enkla leksaker till småsyskonen, saker som jag riktar till en person, något till mamma, till pappa, till mormor eller till en kamrat. Gåvor att ge bort. Eller jag gör något till fåglarna, ett fågelbord, en fågelholk.

Kaske blir det möjligt att göra något tillsammans för ett skådespel, något för klassrummet eller något som hela skolan har användning för - ting som vi får ett förhållande till, saker som vi tycker om, saker som får sin plats i ett socialt sammanhang.

Det är viktigt att det vi gör i skolan inte är uttryck för någon nostalgi utan att vi som lärare är medvetna om att vi lever i en tid då de flesta av våra vardagsting är massproducerade industriprodukter, som är praktiska, billiga och bra, många gånger tillverkade av nya material, som plast med sina möjligheter, ett material som låter sig formas till det mesta. Men det kan vara bra att samtidigt veta att det nya materialets formspråk oftast är utvecklat av en konsnärshand som skolat sin sensibilitet genom att med den egna handen bearbeta ett differentierat material.

I vår lilla studie över frågan om kunskap genom handen måste jag ta med ytterligare en inspirator som gav och ger hela frågan en ytterligare omfattande dimension.

Det är Herbert Read och hans bok Education through art, som han gav ut omedelbart efter andra världskrigets slut. Det var på den tiden då vi i Stockholm arbetade med att förverkliga Kristofferskolan. Ett stort intryck på mig gjorde Herbert Reads efterord till boken, där han beskrev bakgrunden till själva arbetet. Han berättar om hur han håller på att avsluta boken. Det är en ljuvlig vårmorgon utanför London med blommande träd i trädgården och fågelsång, men just denna morgon har han i radion hört att 10.000 bomber hade fällts över Köln. Och han tillfogar att hela mänsklighetstragiken som kriget innebar var den allvarliga bakgrunden till hans arbete med boken Uppfostran genom konst. Hans arbete går ut på att rikta uppmärksamheten mot de slumrande möjligheter hos människan som måste väckas och bli till individuella erfarenheter.

Vår tid ställer oss alla inför nya uppgifter. Vi måste väcka och utveckla anlagen till kreativitet, en social kreativitet, en moralisk kreativitet. Herbert Read har ett stort förtroende för den kreativa människan i människan:

> *"Vi måste få ett nytt förhållande till det moraliska livet. Moralen eller det ädla livet har allt fär mycket varit förbundet med*

> *moralföreskrifter, budord och lag, och deras efterföljelse har åstadkommits genom hotelser om straff och evig fördömmelse. Den moderna människan måste själv bli moraliskt produktiv, moralen måste bli en spontan viljeakt."*

Herbert Read som är en av Englands mest initierade konstkännare vid den här tiden studerar olika tendenser i vår tid och gör sina analyser:

> *"Den gamla livsstilens budord och lagar om hur man skall vara har ersatts med vetenskapens rationella planering. Ur rationella synpunkter måste vi handla så eller så. En livsstil som till att börja med ville ta vara på allas gemensamma intressen har utvecklats till att bli en livsstil för robotar, ett liv efter schabloner, enkla handlingsmönster. Och reaktionen möter vi redan bland ungdomarnas hämningslösa utflöden av primitiva driftsagressioner."*

Herbert Read summerar ur ett studium av många tidssympton:

> *"Världen är sjuk, yttre organisatoriska åtgärder kan inte längre rädda den. Andliga medel är det enda som kan bringa läkedom. En estetisk fostran är ett medel som kan leda till en ny moral."*

I skolorna måste det börja med en konsnärligt orienterad skapande verksamhet i växelverkan med det intellektuella kunskapandet. Redan som barn i skolan gäller det att få möta en skapande verksamhet genom umgänget med olika material i konsthantverket men också genom dans, musik och enkla skådespel.

En verksamhet i skolan som Herbert Read särskilt framhåller, där barnen har möjlighet att utveckla och erfara sina skapande möjligheter, är det som har att göra med kunskap genom handen. Här möter oss samma erfarenhetsvärld för barnen som både Rudolf Steiner och Carl Malmsten talar om. Barnens möte med världen genom att konfronteras med olika material, att få känna motstånd, att bearbeta, att förvandla. Genom hantverket utvecklas sinnenas sensibilitet samtidigt som arbetet skänker en glädje. Här gäller inte i första hand det perfekta resultatet utan erfarenheten. Jag kan bearbeta, jag kan skapa. Jag kan göra något med mina händer. Här kan många gånger ett litet framsteg motsvarande mina möjligheter utveckla en grad av självförtroende.

Skolan har en stor uppgift. Vad skolan givit av skapande erfarenhet kan leda till en erfarenhet när jag blir äldre: Jag kan skapa, jag kan förändra mig själv. Det är erfarenheter som ger kraft till individuella moraliska, sociala initiativ som vuxen, menar Herbert Read, och vidgar konstbegreppet till att innefatta livets konst, att bli 'moraliskt kreativ'.

Herbert Reads bok gjorde ett stort intryck när den kom ut. Den översattes till många språk och debatterades ivrigt. Man kunde tro att den omedelbart skulle avsätta många spår i våra skolor. Den bidrog säkert till att man inför en pedagogisk målsättning mer talade om nödvändigheten att vara uppmärksam på den kreativa människan. Men efter några år minskade talet om kunskap genom handen.

Sista gången jag träffade Herbert Read i London några år före hans död mötte jag en desillusionerad man. Han upplevde att det inte var många som hade tagit hans budskap på allvar. Han kände att hans bok redan var bortglömd - och kanske var det så.

Mycket har förändrats sedan Rudolf Steiner, Carl Malmsten och Herbert Read utvecklade sina tankar och grundade konkreta verksamheter. Det intellektuella kunskapsinhämtandet har utvidgats och fått otroliga hjälpmedel genom olika media, inte minst genom radio och television. Informationsteknologin ger oss oanade möjligheter. Vi kommunicerar med hela världen, får inblickar i vad som händer i naturen och i de sociala sammanhangen varje timme. Vi erövrar med hjälp av förut nästan okända krafter nya verkligheter sammanfattade i orden Virtual reality.

Men det märkvärdiga är, såsom många påpekat, att samtidigt som vi vet mer tycks ett slags främlingskap breda ut sig. Vi förlorar ett omedelbart nära förhållande till vissa värden. Vi ödelägger och exploaterar naturkrafter och människor för våra egoistiska intressen. Vi tycks förlora känslan och ansvaret. Vi anar omfattande ekonomiska intressen bakom mycket, intressen som också gör allt för att förklara att det måste vara så ur nödvändiga rationella perspektiv.

Den i och för sig så nödvändiga och inspirerande intellektuella kunskapen får mer och mer en rationell, nyttbetonad, ekonomisk inriktning, vilket gör att stora grupper av unga människor med andra begåvningar blir utslagna. Och i skolan blir det mindre och mindre tid för kunskap genom handen. Den kreativa handens verksamhet unskränker sig till att trycka på knappar. Samtidigt som vi fått så många utomordentliga hjälpmedel står vi många gånger handfallna inför uppgifter som kommer oss till mötes i livet. Men kanske är det så att dramatiken i den moderna tiden gör oss uppmärksamma på att anlagen till social kreativitet med individuella ansvar, oegoistiskt intresse för världen och våra medmänniskor är anlag, som måste utvecklas och få näring redan i skolan bland annat genom *kunskap genom handen*.

Frågan är om inte Rudolf Steiners formuleringar om viktiga uppgifter i skolan idag, i informationsteknologins tidsålder, har fått större aktualitet:

> *"att vi är uppmärksamma på den fruktbara växelverkan som uppstår när praktiskt konstnärligt arbete på olika sätt integrerar med intellektuellt arbete. Det rör sig om en konstnärlig verksamhet i vidaste mening, som är så beskaffad att den bidrar till att göra tänkandet levande i vuxen ålder, så att det vi gör som vuxna har kraft att verka socialt"*

Paper Presenters

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The Image of Becoming: Questions of Time, Identity and Education in Textile, Clothing and Craft Design

Abstract

The study investigates a theorethical problem concerning the essence of the relation between human being and textiles and clothing. The main question is: In what way we can treat and research textiles and clothing as both concrete material form and imaginary content, involved in such a way in our everyday being, that it contributes to the maintenance and development of our identity and way-of-being. By analyzing the different paradigmas and theorethical conceptions the traditional Cartesian concept of human being is found to be what prevents traditional theories of textiles and clothing from treating an ideological meanings and gender aspects of textiles and clothing. An epistemological analysis reveals that a possible solution could be found with the support of feministic and phenomenological approaches to knowledge, both aiming to transcend the Cartesian dualism.

Keywords: Textiles, clothing and craft research, gender identity, body - phenomenological philosophy, feminist theory.

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The Image of Becoming: Questions of Time, Identity and Education in Textile, Clothing and Craft Design

Interweaving the Approaches

This article compromises three parts beginning with a theoretical examination of the concept of time. Then a provisory distinction is made between those various conceptions between time in the relationship of the craft (includig textiles and clothing) and identity. This is then followed up by an investigation into women's craftial writings, where concrete observations are made with feministic consideration.

The linking of feminism with craft (including textiles and clothing) in itself a series of questions, some of them analytical and theorethical, others more practical and ideological. Feminism is an ideological practice with its own applications. Craft, which also has its own history, appears at first sight more concrete. However the everyday understanding of textile, clothing and craft design research has become institutionalised and hence our understanding of what craft has become is somehow, on the one hand embarrassing while on the other, impenetrable.

In this article the theoretical concepts time and space are used as analytical tools in figuring out new ways of speaking about subjectivity in craftial processes. The primary intrest of this studie is to enquire within the phnomenological-feministic framework how craft as connected to the various conceptualisations of time-space is ideologically and political observed.

Time and The Ontology of Science

When discussing identity and subjectivity, the importance of time as an analytical tool is utterly essential. Firstly, just how we understand the essence of time is connected to the ways we conceive of our individual situation. Secondly, the history of philosophy is strewn with speculations about the nature of time and these form the most fundamental categories of ontology and science. To understand this we need to turn the history of science: Plato's and Aristotles's worldviews.

Aristotles devised his theory of time in opposition to that of Plato's. While Plato emphasised the timelessness and immutability of the ideas, Aristotle's works presented a more dynamic conceptualisation of time, though it should be said that both thinkers gave priority to universal matter over the changing and temporal (Saarinen 1992, 33). Aristotle posits three counterclaiments against Plato's idea that time is identifiable with movement and in particular, with bodies in movement. Firstly, although process is always located in time, it can not be said that the position of time is determined in space - or that time is space. Secondly, Aristotle claims that it *is* possible to say that movement is slow or fast, while time itself does not have any speed. According to Aristotle, time is always connected to movement. Particularly in late Aristotelian philosophy, the concept of time fell into a secondary position with regard to the conception of movement (Knuuttila 1989, 152).

The third issue which Aristotle disputes in Plato's thinking is the idea of space where everything including time itself happens in space. But time is not the same as space and space is neither empty store or container, *chora*, nor a material thing. (Aristoteles 1970 (Bk IV): 4). Instead the following three categories are essential for time: like space, time is *infinite* and *continuous* and it is infinitely *divisible* in numerical terms. The presence of time owes its recognition to human sense, and not time in any objective, physical sense. This is what Saint Augustinus introduced in the 11th book of his Confessions when he took the step from speaking of past, present, and future as substantival entities to speaking of the same three tenses as adjectival qualities: the past, the present and the future.

In the framework of this study the comparision of Plato's and Aristotle's world-views lead theoretically to two ways of conceiving time: the linear and the cyclical conceptions. These forms are generally accepted and have in actuality become domain in Western civilization although they are not the only possibilities (see chapter three). The first mentioned is used to connect events of the last century: the genesis of modernism and the advent of industrial and capitalist societies, in which social order is created via the category of wage-workers. Characteristic of the linear time-concept is the way in which time is understood as an arrow which signifies only one direction; the direction of the future. On a concrete level this sort of time conciousness mirrors our chronology, where seconds which are counted convert atomistic changes into minutes, hours, days and finally years.

The latter, cyclical time, is used as connected to precapitalism, the premodern and peasantry, where agricultural tasks such as sowing, plowing and harvesting have be carried out at their appropriate times. (Julkunen 1989, 11). In this conceptualisation seasons have dominated the economy of everyday life. But when economies became centralised people amassed into towns and political bureaucracy and authority expanded: Telephone and railway scheduals demanded a universal time system which would co-ordinate life in the modern world (Kern 1983, 34). Thus the effect of the rationalist world-view and particularly its conception of time changed people's lives so that life was more and more lived according to the rhythm of the clock, indifferent to the cycle of nature and local life styles (Thompson 1967).

Some Observations

It needs to be said that, the above conceptual representations of time easily translate into categorical and superficial ways of thinking about time. To make this point, let's take an example.

As a prerequisite the applicants of Teacher Education, Section of Textile, Clohing and Craft Design were asked to design and create glove puppets which represent the image they forsee of family models and life-forms in the year 2050. Of the approximately 84 group of glove puppets and written and illustrated reports (portfolios) studied, three different types of life-forms were identified. The first was named the ecological life-form and the second, the high-technological life-form. The third type of life-form could be seen as a mixture of these.

Such facets of family and women's lives previously mentioned, such as wage-labour and reproduction, have implications with relation to time in various ways. The ecological life-form is possible to connect to the cyclical time conception, which could be defined as 'task-oriented'. Instead, the conception of time as teleological and linear is internalised as logical and ontological values of a technological life-form (see Davies 1989, 31-34). But what does this mean regarding these teacher applicants and their worldviews?

It is possible to study their portfolios as documentations representative of the female meaning of production, and then compare them to other kinds of women's writings. On the basis of this idea, the portfolios studied revealed that the same 'poverty of language' which Kristeva (1987, 113) has found in literal texts by women could also be identified in the teacher applicants' craftial texts. Firstly, the style they present has two permanent features: when unpaid care-work such as childcare, housework, looking after the old, the sick and the disabled is pivotal in determining an ecological life-form, in the high-technological life-form the situation of women, who are wage-earners and whose life is moulded by their relation to wage-labour is influenced by the dominant temporal consciousness.

Secondly, the signifier of craftial meaning production is insufficient: the emotional force or drive remains latent. That is the case in both the modest (ecological life-form) writing and those called risqué (high-technologial life-form). To sum up these observations, according to the writings of young women it seems that they tend to deny their situation as female subjects and that they are quite ready (or as applicants, they pretend to be ready?) to withdraw into that space - the silent state inside male-dominated culture and science - left over for them (see Grosz 1995, 98-99).

The Sense of Time: Phenomenological Time Conceptions

In modern Western civilisations the binary oppositional way of thinking is 0dominant. The shortcomming is that this sort of thinking does not recognise the synthesis of consciousness and experience: time as subjectively experienced (Itkonen 1995, 60). That is not the case when we turn our attention to speaking of the phenomenological. For example, Marcel Proust's *A la recherche du temps perdu* took place in public time though the narrator's private time recognised no standardised system.

In general the phenomenologists have said a lot about our experience of time. In phenomenological understanding it is not the presence of a physical or concrete time but rather the metaphorical presence of another temporal experience, namely Being-in-time. The core of the notion of historicity could be utilised by the central phenomenologists, Husserl and Heidegger. Both used the term 'historicity' (*Geschichtlichkeit*) to denote the idea that we are in history as we are in the world: this serves as the horizon and background for our every-day experience. In *Being and Time* (Sein und Zeit) Heidegger stresses everydayness, yet the focus or direction of our attention lies not in the present but in the future: not on the tools, as Heidegger says, but on the work to be done.

> *"If understanding must be conceived primarily as Dasein's potentiality-for-Being, then it is from an analysis of the way of understanding -- the possibilities themselves make manifest an essential tendency of Being - one which belongs to everydayness."* (Heidegger 1962, 210 engl. pages)

Yet we cannot speak time without refering to space. Two phenomena are so intimately joined that is quite common to find their synthesid where the hyphen between time and space is placed in present-day scientifical studies. The idea of a unity of time and space originates from Henri Bergson's work, where he discards all articulate distinctions and instead of them presents his concept of *duration. La durée reelle* is the inital experience of time thus it is something other than a mathematical point delivered from time to space (Bergson 1929, 79-80).

According to Bergson's idea of the fluidity of time, man's consciousness and sense of time are not based on separate ideas, as each event is linked to previous and forecoming evens. In *Creative Evolution*, Bergson gives the modern name *cinematographic* for the old illusion where movement can be understood as an intermediate image between two instant images of time. These scheduled images represent conciousness and the so called mechanism of 'normal' science, which is essentially cinematographic. (Bergson 1983, 306-307). It is also true that the cinema does not give us an image to which movement is added: it is such that it gives us a movement-image, which is totally different than the result of natural perception. It could be said that cinema offered wider expression to a new scene of time.

In his works Merleau-Ponty affirms Bergson's philosophy of duration. For Merleau-Ponty the lived experience of space and the spatiality of science cannot be readily separated insofar as the 'objective space' of scientific speculation can only have meaning: "The *Lebenswelt* is subjective" as Merleau-Ponty (1968, 185) states. Space is not three dimensional, nor is time a separate quantity; they are closely and inseperabely joined to each other to forming a four dimensional continuity known as space-time.

In his critique against Husserl's idea (Krisis III) that the phenomenological reduction *transforms universal history*, Merleau-Ponty states the following about double ground of life and consciousness:

> " *--and it is what makes there be able to Stiftung not only of an instant but of a whole system of temporal indexes -- time (already as time of the body, taximeter time of the compared scheme) is the model of these symbolic matrices, which are openness upon being.*" (Merleau-Ponty 1968, 173)

In *Cinema 2. The Time-Image* Deleuze states that all Bergsonism could be crystallised into following idea: duration is subjective and consits of our inner reality (Deleuze 1989, 82). According to Deleuze, Bergson must express himself in this way, although he happens to say something very different than what he might mean: the only personal and subjective thing is time, the time which is stuck with its own non-chronological basis (ibid.). Finally, we all are inside time, in time, and not vice versa. Time is not the space inside us. On the contrary, time is the interior in which we live, move and change (ibid.). To describe this inner nature of perception, Bergson formulates the following law: "perception is master of space in the exact measure in which action is master of time" (Bergson 1988, 32).

Time and (Fe)Male Identity

These ideas outlined in the previous chapters have formed the basis of vital questioning in Western societies since the end of the Ninteenth Century; the way we perceive time, the human individual and language. We have also noticed that, in particular feminine subjectivity becomes problematic in its relation to certain forms of temporal conciousness, which mark the character of Western thought. The conception of time characteristic of traditional epistemology defines male as *a point in time*, while the female world consists of *spatial time*. Without a doubt, the change of period calls for the paradigmatic changes of perception and our conceptualization of space-time (Irigaray 1993, 23).

In *Women's time* Julia Kristeva brings together the problem of European woman and the study of time. In her writings, Kristeva connects critical theory to psychoanalytical understanding and interpretes the collapse of logocentric capitalistic order as an image of modernism. Kristeva writes about the paradox of identity formed by historical layers and contrasting loss of identity. Kristeva stresses two things. Firstly, as women we should think very carefully think over the conditions in which we follow the conforn to the symbolic and material processes of social interaction. Secondly, the conditions of social-symbolic agreement must be negotiated anew (Kristeva 1993, 166-172; see also 1987, 110-117).[1]

We have already seen in the chapter entitled *Some Observations* how the working of oppositional time conceptions dominating so much of Western thought easily reduce into binary life forms and confirms standardised conception of time. In order to rewrite and -read both craftial process and specific craftworks as a representation of existing values and assumptions, he traditional way of thinking about the construction of a (feminine) identity, meaning and language in craftial works could go no futher.

As always with major changes in frameworks of thought, there are multiple interacting aspects and conceptions of truth and meaning. Investigations of craft have, up to this point, been in accord with various presumptions, employing one or the other method. Generally it has been stressed that taken in isolation, craftial process (cp. practice of writing) and the work of craft seem perfectly explicable, but, craftwork cannot be taken in isolation. Intentional objects or artefacts, - as so many other cultural objects - involve both the fields of ideology and psychology, and desire.

Western humanist individualism has placed the human individual at the centre of its conception of reality. According to this outlook the intentional author is 'read-able' through her or his own craftial 'text', in which she or he reflects an inner consciousness. In classical film theory this attitude has been championed by the realists, who vied that the screen was a *window* on the world. (Andrew 1984, 134-135) On the basis of this idea, the identity or author is seen as the authenticating origin of meaning and truth. This is something which could be connected to Tarkovski's image-conception: 'the pressure of time in the shot' is not a superficial appearance, but an image of the flow of life. (Tarkovsky 1989, 158; see also Deleuze 1989, 42)

The other classical way of thinking about meaning production can be called *formalism*. While realistis confirm the sense that the author's work of craft would express her or his personal thoughts and feelings or offer objective reflections of her or his inner reality, the formalists focus on language, that is to say, the narrative structures of craft. From the formalists point of view, the craft is like a *frame* or *exhibition*, *mis-en-scéne*[2], whose boundaries shape the images appearing on it. The priority of text and those common or newborn codes implied in text mean that a gap exists between the word or author's sense of reality and the visible elements which produce and carry the (unique) meaning of craft work. Thus the symbolic order is a ready-made structure which is dominating both the creative and thinking processes on the conscious level in the relationship between these elements and the technical and material ways of producing.

The third metaphor, which is possible to advance, is that of the mirror. This metaphor of the psychoanalytical approach concerns craft's rapport with the spectator; the relation of two systems, that of psyche and unconsciousness, and that of the craft. In general, within this poststructural framework text is seen as the site of multiple meanings and intentions. Instead a unitary sense of the author's identity or stable text, *self* as Lacan emphasis, is not seen as a coherent inner consciousness.[3] Instead an interaction between the author and the text and the text and the spectator produces continuously new meanings and identifications. As Deleuze points out, the unconsciousness is that space of transition and production, while the unconsciousness is transferred to philosophy through the concept of difference (*différance*). In this Deleuze agrees with Foucault's objections to dialectic, which divides reality into dualistic opppositional systems, i.e.: identity *contra* non-identity. The subject is non-unity, it is multiplicity (Braidotti 1994, 162-167). Therefore the attention should not only be paid to the expressive subject but to the process of writing as an institution as well. This process situates the subject into his or her place within the conceptual order and constructs the social gendered identity. Thus it could be said that this is craft's particular advantage and it applies in maintaining the implications of all metaphors earlier presented.[4]

But the project aiming to situate the subject within the craft producing process is not completed; the discussion of identity and language in craftial process should be developed futher. At the same time the negotiation of subject location both in craftial process as well as in craft's research project should begin. For this, the phenomenological idealism, which is characteristic for realism and the theories of auteur, can only serve the basis for the concept of identity. What is significant for the theorisation of craft on the basis of formalism is the privilege, which it gives to material (or techniques) over process. But to be able to articulate the question of individual (gender identity) and social cultured language of craft, we must connect all the new approaches with the problems of knowledge and epistemological legitimation. (cp. Braidotti 1994, 160)

'Time is Out of Joint' (Hamlet): Towards New Paradigms

Essentialism has led to large-scale discussion which could be connected to postmodernism. For example feminist critics of science have challenged the existing norms of knowledge; the given subject position of knowing, traditional methods of knowing and values of truth and false, which are marked from male paradigms. Particularly the binary ordering, where man has been imposed as the human subject; the norm, and woman a subordinated term rejected, the question of New subjectivity has became current theme. (Grosz 1993, 194-195)

In two books that cinema led Deleuze (1986; 1989) to write, he posits himself between philosophy and cinema; not shutting himself within the cinematic space but rather thinking with this object in mind (Ropars-Wuilleumier 1984, 255). The basis of Deleuzian thought could be found in Peirce's work: the three-fold division of sign and three phenomenological categories called *Firstness, Secondnes* and *Thirdness.*[5] Deleuze's procedure is the following: in his reading of Peirce and Bergson, Deleuze first puts image before sign[6] and then develops three different types of (movement-) images[7] called *perception-image, affection-image* and *action-image*. With perception-image Deleuze implies a unicentered subjective perception related to the movement-image, hence a centre of indetermination (Deleuze 1986, 64). When one passes imperceptibly from perception to action, movement-image becomes first *action-image* and then *affection-image*, which is connected to interval and marks the coincidence of the subject and the object in a pure quality (ibid. 65). In Cinema 2 Deleuze (1989, 31) defines perception-image as being 'like a degree zero in the deduction' and continues that this zeroness will be before Peirce's firstness.[8]

> " -- *the perception-image received movement on one side, but the affection-image is what occupies the interval (firstness), the action-image what executes the movement on the other side (secondness), and the relation-image what reconstitutes the whole of the movement*

with all aspects of the interval (thirdness functioning as closure of the deduction)." Deleuze (1989, 32)

The process going on within textile, clothing and craft design research areas may been seen as a continuation of the general feminist critique of science. Craft research is a new scientific discipline; it constantly makes efforts to define its own epistemological processes and way of knowing. At the same time, it necessarily takes part in the process which attempts to prolifilate new meanings and scientific modes of representation. The paradigms which possibly offer new directions, will be represented in following chart.

Dimension	*Sign*	*Image*	*Position of subject*	*Ways of being*	
Formalism	icon	affection-image	frame	pictorial space-time	First
Realism	index	action-image	window	literal space-time	Second
(Post)modernism	symbol	relation-image	mirror	portrayl space-time	Third
New logic	multiplicity	image of becoming	postpersonality	New space-time	1+2+3 = 4

Figure 1.

The Comparison of different paradigms and subject positions.

Taking account of the Peircian philosophy, the Deleuzian way of thinking, and a feminist critique of science; the basis for a new epistemology of textile, clothing and craft reseach could be formulated and proposed. At the center of this new theory, which is formulated on the grounda of an open (image) system, we have three concepts adapted from Deleuze: *pictorial time-image*, *literal time-image* and *portrayl time-image* (see Figure 1).

There is no need to elaborate upon nor to concretize this theorethical framework (charted above) though I am eagerly looking forward to a more thorough examination of these ideas and seeing if and how they will be utilized in the future. More essential is the notion that each of these three concepts are an agent for specific epistemological focuses in the field of textile, clothing and craft design research. Each of these parallel paradigms are conceivable in studies where we are focusing on the connections between philosophical thoughts and the individual's relation to reality; identities of particular time-space.

Conclusion

Drawing conclusions from the notion of time, identity and art and craft (including clothing) research, three aspects shoud concern us in the future. Firstly, as researchers and educators we should continually pursue efforts to highlight visible the underlying and invisibile relations between forces of different space levels and thus re-examine the identities and laws by which we live. Secondly, we should be aware of the presence or *parousia* (presence of becoming here and now) of modern multi-dimensional media and its effect on our conciousness and changes in the conceptualization of space-time. Thirdly, we should ask as did Braidotti (1994, 179): "What is the view of the self that is operational in the world of *informatics of domination.*" The task of feminist craft research is how to inquire of identity as a site of differeness. (cp. ibid. 163) At the same time we should pay attention to the construction and manipulation of docile, knowable bodies in our present social system. This is a way beyond dualistic opposition or the concept of identity as sameness. Beginning this the research where the focus is on the laws of sexuality and categories of representation which support cultural constructions of the feminine or masculine identity enables us to recover female or male texts signed and authorized by the female or male subject.

The most fruitful starting point for phenomenological-feministic craft research as adapted from Deleuze's thought, is to begin with his effort to alter the image & activity of thinking differently. In this sense, thinking is living at a higher degree in a multidimensional manner. It is an active process of becoming.

Notes

[1] A critical Kristeva reader points out here: all that Kristeva says about semiotic - openness and pictorial, in my sense - is based on symbolic order (or Lacanian sense of order) in Kristeva's thinking.

[2] That means all what is possible to see on the screen.

[3] The idea of unitary and ideal self or self-image could be criticised as patriarchal and phallic construction.

[4] According to Jean Mitry 'While the frame fuctions as Arheim's "picture frame" for the representation, it fuctions as Bazin's "window on the world" for thr represented. (Lewis 1984, 15)

[5] Deleuze uses the collection the collection of Peirce's writings presented by G. Deledalle. 1978. *Charles S. Peirce. Écrits sur le signe*. Paris: Seuil.

[6] Sign could be understood here as a symbol of closed system of meaning production (cp. Christian Metz 1983), while image is a term, which refers to openness and an antilinguistic point of view.

[7] Deleuze divises movement-images into three varieties - perception-image, action-image and affection-image.

[8] Deleuze (1989, 33-34) wonders, why Peirce thinks that everything ends with thirdness. On the basis of film, Deleuze states that Peirce's thirdness is not as a limitation of the system of images and signs. Following that, this article in Figure 1. has dedicated a row for New logic and subjectivity, which could be called postpersonality.

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A Look at the 'Glass Case'

Abstract

The aim of this paper is not to overwhelm the reader with empirical facts wrapped up neatly in a case-study package, but to sketch out some of the ideas governing my current doctoral work. The historical backdrop is provided by the post-war 'Golden Age' of Finnish design, a period of short but intense international recognition, where Finnish designers became national heroes and their objects came to be seen as a kind of national artform. The dissertation itself, entitled *In the Guise of an Asymmetrical Mermaid* (in Finnish *Muotopuolen merenneidon pauloissa*), deals with modernist discourses, image and identity in the representation of Finnish crafts and design in the 1940s and 1950s. The project has been funded by the Academy of Finland, and will be published in 1997.

Keywords: Design history, craft studies, cultural studies.

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A Look at the 'Glass Case'

The Mermaid

I would first like to begin by quoting a rather unlikely source, the film director Pier Paolo Pasolini:

> *"Art and commodity cannot co-exist in an artwork. Their co-existence should be understood, not as a dialectical relationship, but a kind of deformed figure, a mermaid, half fish, half human; in fact a phenomenon, that belongs to the world of circus -- Art and commodity can never be joined, they can only - if they are forced - live together inside the same body, in which case the outcome is a monster."*

The modernist concept of art can be characterised by a tendency to idealise and isolate the aesthetic: understanding art for an intiate, implied separating it from the rest of society. This tendency displayed itself in three central discourses: aesthetic formalism (the idea of 'pure' form), medium specific autonomy (the idea of purity of material or medium) and the supposedly anti-political nature of artistic expression (pure aesthetic function). In accordance with the great modernistic narrative, Finnish - and

Scandinavian - design has been eager to recall its history as a linear evolution towards pure form in useful commodities[1], stressing values such as democratic functionalism and internationalism.

My study implies a shift in focus regarding both object of study and concept of history. Interest here is focused less on history as that which actually happened, and more on history as that which was recounted or represented. This shift in emphasis is important: it uncovers a mythical level of history, which set the stage for the cultural production and canonisation of certain objects and designers. On this mythical level, events such as the 'Miracle of Milan' (as Finland's successful participation in the Milan triennials of the 1950s has been called) were spectacles that, paradoxically, were staged abroad, but took place in Finland. So instead of attempting to reconstruct any 'objective' history of forms or institutions, I have chosen to look at another kind of production: of image and status, the projection of culture, ideology and identity upon and through aesthetic objects.

I have called my approach the 'method of the glass-case', conscious of the fact that it is more an attitude than a methodological system. It came about intuitively as a reaction to the obviousness of certain tendencies in design history, such as the stress on the supposedly empirical realities of industrial mass-production, technology, commercial history etc.

My stance as a scholar is one of self-inflicted regression, since it entails a return, so to speak, to the aesthetic sphere, but understood here in a broader and more textual sense than is usual. When scholars turned away from aesthetic rhetorics in craft and design related studies, a lot of interesting material, infested with ideology, was left untouched.

So back to the glass case. I was earlier criticised by one of my professors of looking at objects as if through a display-case, and she urged me to look at and behind the objects themselves, into production technologies etc. Here we touch upon the vital question of the opacity/transparency of an object (or work of art) and the act of spectatorship should not be overlooked.

Indeed, I decided to obstinately keep my position on the outside of the vitrine: it was precisely that glass case that intrigued me, not the physical production of the objects themselves. (I was also intrigued by the prospect of deconstructing my own aesthetic attitudes.) My basic idea was, in all its simplicity, that the post-production construction of meanings - or cultural identity if you like - of the object is too relevant to be left so discreetly untouched in design scholarship. The creative and technological process may, of course, end with a finished product as the outcome, but the cultural or interpretational process is never-ending. So my 'glass case' is formed by all the naturalising discourse that lends an object cultural status, raises it above the mundane, or distances it behind a shield of glass. Or, to take Pasolini's idea a step further, turns it into a fascinating mermaid, encaged in its wonderful aquarium.

Instead of the somewhat rhetorical idea of the glass case, one could simply talk about culture - or cultural codes - and discourses.

But what then is this cultural aquarium composed of, concretely speaking. For lack of a better term I would talk about reflecting surfaces, that like glass sheets construct the culture of the glass case. The object, itself relatively mute, becomes eloquently polyphonic when escorted by advertisements, photography, and the framework of exhibition design.[2] The experience of this polyphony is then reduced through verbalisation by the media, critical as well as popular journalism. Enhanced by and embracing all of these is the personal presence of the craftsperson or designer behind the objects.

Presence is another key-word here: the aesthetic-experientialist presence of the object as an auratic being, the human and creative presence of the signature designer, the presence of a culture of desire. All constructed or enhanced by the texts and discourses escorting the object. These texts do not tell us much about the objects as material beings, but rather about the values and attitudes prevailing in culture, and the hidden agendas involved in the construction of their (the objects) cultural status.

Such media of sublimation have largely been overlooked in scholarship because interest has been focused on the seemingly objective 'truth' found in the object purified of the image-creating contexts. This purification is a relic of high-modernist idealism of purity and autonomous aestheticism - or the democratic functionality (a variation of aesthetic autonomy) - of the object. But is an object simply form and matter?

Professor W.J.T. Mitchell has talked among other things about the fetishisation of modernist art; one of his rhetorical, but telling, remarks is that modernist artworks "want to be held, not just beheld". This game with words seems all the more appropriate when talking about small, three-dimensional objects with underlying commercial aspirations. Modern craft history, if anything, could be reconstructed as a "history of the articulation of desires". This entails a deconstruction of the aesthetic codes involved in a particular class of objects, but also of the experiential aspect of art writing and marketing - the rhetorics, in the classical sense of the term. This may also mean a symbolic return to the initial idolising process of such objects.

Moreover, this is to me a question of looking not *through* the object, but *at* the text, and correspondingly turning what has previously been seen as innocent, disinterested source material into the object of research itself. It entails replacing much of the empirical historical data with the reflecting surfaces I mentioned, to construct from them a public image of design - the *public spectacle of design*, if you like - as a potential reading of history, not *the* history of design.

The Finnish Case

To illuminate the approach I would like to look at one Finnish object, or rather its different re-presentations. Let's take for instance a glass vase designed by Tapio Wirkkala around 1950. In a contemporary photograph by Otso Pietinen, leading commercial photographer of the era, we see an interpretation of the vase. In it the vase itself, a flower pot, is de-objectified and dematerialised through pictorial means: the rhythmic repetition of the object, the combination of black background and splashes of light, create an illusion of surreal landscape.

Even more seductive power is found in another re-presentation, an advertisement for the Karhula-Iittala Glassworks, which presents Wirkkalas vase represented by Pietinens photo. The notice is entitled *Tuonelan virta*, with a caption declaring Wirkkalas international success. The glass vase has transformed into "the Stream of Hades", a modern variation of the 19th-century national romantic theme. So it is not only elevated into an aesthetic sphere, but also sublimated into a cultural symbol, distinctive and distant, yet desirable. Encaged in a glass case, yet purchaseable.

Perhaps the most efficient, though partly invisible means of cultural canonisation in design has been the persistence of a nationalist discourse in the field. What, after all, could be more appealing to my self-esteem as a Finn than the idea of 'Finnishness' as an absolute value and essentialist feature in visual creation. In the international setting, the display of finnish objects naturally yearned for a context and verbal validisation. For Finns, this national discourse created a sense of pride and cultural continuity, values of security. Abroad, it created a veil of exoticism, classified otherness, which gave an individual meaning to this particular variant of modernism. Universalisation was the general objective, but it utilised nationalist differentiation as a rhetoric tool.

The spectacle of post-war Finnish design was enhanced by certain inter-related cultural discourses, such as 'nationalist' discourses of primitivism and return to nature, 'modernist-aesthetic' discourses of vitality and intuitive expression and "modernist-masculine" discourses of purified form - the latter being essentially exclusive, in both senses of the term. I look at these discourses in the context of cultural relations and national identity, partaking in the project of representing modern, independent Finland.

For Finland, aspiring to become a part of the western market economy, it was especially crucial to mark the country's position west of the Iron Curtain. This is why crafts and design were given such an official role in Finland's national cultural politics. This is also why it was so important for Finland to figure under the somewhat artificial general heading of *Scandinavian design* in the 1950s and sixties. Within the Scandinavian context Finland represented 'otherness': primitivity and naive creation.

In a talk that Julia Kristeva gave at Helsinki University, she conceptualized the idea of identity as an ambiguous position of "belonging and not belonging". Craft objects, too, should be seen to carry such 'identities', not the autonomous or fixed identities of the statue (to use the Kristevan metaphor deriving from Marcel Proust), but the polyphonic identities of the magic lantern. These identities to me are reflections, governed by values and role positions expressed in the cultural discourses surrounding the objects.

Bringing these discourses (or reflecting surfaces of the glass case) to the fore, shows us some of the values, hierarchies and hidden agendas - aesthetic and, more interestingly, non-aesthetic - the modernism of the applied arts was actually impregnated with. It makes visible the rhetoric means and ideals, with which the essentialist concept of pure form was produced, enhanced and finally popularised. What is at stake here, finally, is Pasolini's 'mermaid': the authenticity, innocence and disinterested nature of craft, or art in general.

Notes

[1] The role of craft in such a historical scheme will, of course, be minimal. The problematic status of craft in design history is also linked with the role and relevance of craft as a cultural form today. While industrial design has developed dynamically in the Nordic countries, craft art has receded to a somewhat isolated position, and in art history it finds itself in a cleft stick, being neither 'art', nor 'design'. The discourses of craft and design, seen often as separate today, are hard to distinguish historically in the Finnish case, since most of the Finnish objects presented in international design exhibitions before 1957 were in fact craft objects.

[2] Since I have been misunderstood on this point, I should stress that my aim has not been to study, for example, strictly the history of photography as used in publicity, or the history of exhibitions in an empirical sense, but instead interpret them as images or image bearers. My modest role here is perhaps analogical to the 19th-century documentarists (albeit without their ideal of linear history); only I am documenting and making visible not the aesthetic object or its creation, but the aestheticising and value-creating framework around the object, the invisible or the so far overlooked - in short, the glass case.

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Textile Art in Perspective: Looking at Textile Art as a Historical Project

Abstract

The contemporary textile artist has a very many-faceted job. Today, different kinds of functions around textiles in history are seen as textile art although in their time they had very little or nothing to do with it. Textile design is often seen through the tradition of pattern design, not so much as a holistic design-process, which includes thinking on paper and with hands. Among the textile artists of 1980's and 1990's there's a strong trend towards crafts - making with own hands is considered important. The current discourse in design and crafts fields wants to question its' relation towards high art.

Keywords: Textile art, crafts, textile history, crafts history, The Friends of Finnish Handicraft.

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Textile Art in Perspective: Looking at Textile Art as a Historical Project

Introduction

Inspired by discussion roused by prof. Eisners lecture I decided to focus in my speech on the issue of art - craft separation from the point of view of my own studies and work in the fields of art and crafts. I am working as curator in the Craft Museum of Finland and I will present here some ideas aroused by my postgraduate studies in art history. I wrote my masters thesis on the Friends of Finnish Handicraft (founded 1879), one of the central institutions in Finnish textile art - and that is the material that I will continue to work with in the future.(Svinhufvud 1995)

What is Textile Art?

In the present way of thinking - and talking - the history of textile art stretches unproblematically past the historical moment, when the education of textile design officially started. It stretches past the moment when textile art as a concept started to exist in Finland. This 'Story of Textile Art' interlaces many different approaches to textiles and textile art and the professions of textile artist and designer. (see for example Maunula 1989-90; Toikka-Karvonen 1971)

Textile artists have today a very many-faceted job which includes designing and carrying out own designs, designing unique art textiles and serial production, projects with handmade textiles as well as mass production in industry and so on. In my study, my aim is to look back from *today's reality of textiles as art* and try to outline different traditions behind the contemporary situation. These traditions include art, design, crafts, cottage industry, leisure work etc., but they share one history of textile art in the present discourse. Different kinds of functions around textiles are seen as art today although in their time they had very little or nothing to do with it. When you talk about the history of textile art you start with the anonyme folkwoman and her creativity.

The image of modern textile artist as a mostly designing artist (designer-artists) was constructed starting from the late 1920's, when the professional education for textile artists began. This was established by founding the institution of textile art in 1929 at The School for Applied Art, today called the University of Art and Design UIAH. (Marjo Wibergs's recent dissortation is a critical survey on the development of textile artist's profession at the school: Wiberg 1996) Textile artist's role as a designer became even clearer in the imagery of 1950's and 1960's when 'the golden age of Finnish design' showed textile artists alongside other professional designers.

In the golden age of modern textile art in Finland, the 1980's - which celebrated a great amount of public orders and won a lot of recognition to

Finnish textile art - textile artists worked still widely as designer-artists. Textile artist designed, chose the materials and working methods and controlled the execution of the piece of textile art. A craftsperson was responsible for the tehnical execution of the piece. For example well-known textile artists like Irma Kukkasjärvi, Kirsti Rantanen, Maija Lavonen have collaborated with weavers. Today, most of the textile artists want to execute their textile art themselves. Specialization in individual technical and material expression is considered important. AJAN TAJUT textile art exhibition concentrating on art textiles - organized to celebrate TEXO's 40th anniversary - in the Museum of Central Finland in Jyväskylä in spring 1996 presented this trend in several examples.

Craft in Textile Art = Design?

Textile design is often seen through the tradition of pattern design. Not so much as a holistic design-process, which includes thinking on paper and with hands. This story is constructed discoursively of individual artists and of individual pieces of art textiles. The model and its' realization are separated. The artistic work (the visual design = the idea) and the material being of a piece of textile art (materials, techniques, serial reproductions of the idea) are set apart.

Textile design today is usually drawing or painting a design of a textile on a paper, from where the pattern - *the idea* - is transferred (by designer, craftsperson or industry) to the textile material. Compared to the tradition of textiles as folklore, this is a change from the traditional technique and material -centered design (by the loom) to pattern design independent of the material (on the paper). When the departement of textile art was founded and technical education was introduced in the curriculum of the School for Applied Art in 1929, you might say, that the education of professional textile designer moved back towards the tradition of folklore. Until then, textiles were on paper.

Discoursively, institutions like The Friends of Finnish Handicraft have 'functioned' for the separation of the two sides of textiles (the material and the ideal) in its' role as a 'pattern bank'. The Friends of Finnish Handicraft (FFH) have obtained a selection of patterns which they sell further as patterns or as readymade pieces of textile art. The visual image of a textile pattern dominates - material and technical qualities often seem to be secondary judging from the documents that I have gone through (Svinhufvud 1995). Also the traditional crafts education has discoursively re-produced this two-foldeness. For example, at the beginning of this century the crafts schools acquired FFH's textile patterns, which the students carried out as part of their education.

The point is not, whether textile artists knew how to execute their ideas in textiles- if they knew how to weave. In fact, the vast amount of textile designers who have worked with The Friends of Finnish Handicraft have had the capabilities. It is interesting to note, though, that one of the major reasons for founding the departement for textile art at the School for Applied Art was the lack of knowledge in the technical and material execution of textiles. Decorative artists didn't have to know how to weave or how to sew.

Arts and Crafts

My studies in the history of textile art in Finland as a basis, I find it impossible to categorize objects as art or craft and art or not-art and I sympathized prof. Eisner's view of art and craft separation as an issue very much 'inside everybody's head'. In our present society the concept of art is extremely value-loaded. The strong status of 'high-art tradition' in existing cultural and social structures don't make it 'fair' to compare art to crafts.

Ambiguity between (visual) art and crafts - as concept and as phenomena - is really a much discussed topic in Finland, too. The fact that you can't objectively decide whether something is art or not, is widely recognized. In spite of this, the discussion often tends to look at the concepts through the *quality* of individual 'craftspeople or pieces of craft'. Whether they are 'good enough' to be seen as artists or art. The problem is viewed unquestionably from high art towards crafts. You don't ask whether an artist is good enough a craftsperson or whether a piece of art is a piece of good artisanat.

Philosophical (or esthetical) problematization of the onthology of craft (or art) doesn't give many answers in the situation where the discoursive traditions of the crafts field haven't been analyzed and the differencies recognized. I tend to seek the answer in the possibilities that socio-economical explanations offer. The concepts are culturally and socio-economically constructed, and thus, in my view can be explained with the aid of historical research of these constructions.

The central interest of my study is the dichotomy between art and craft *within* the field of so called applied art or design in Finland. I study the difference between craft and design in textiles. Due to the complex map of concepts in the crafts field in Finnish language I am forced to talk about my object of study in English with the concepts *art* and *craft*. I can't say that I study crafts and design (which I in a historical sense do) because in the present vocabulary this pair of concepts stands for the professional crafts field. (For example the educational field uses the translation crafts and design institutions as a general term for schools - in Finnish käsi- ja taideteollisuusoppilaitos). This illustrates, in my view, one problem of research (discourse in research): all the good words have been reserved for something else that I want to mean! (see also Ihatsu 1996)

The real issue is, of course, the reason that causes this confusion of concepts. There we come to the point prof. Eisner also presented in his lecture: why are there separate schools for crafts and for art (design) and why are there separate organizations for craftspeople and designers?

The answer can be looked for in the history of this field, and I won't get deeper into it here. Why, then, does the confusion of concepts seem to be a more or less permanent state? There can't be found any kind of concensus about the concepts of arts and crafts field.

The history (or histories, more precisely) of craft and applied art (design) is still mostly written from within the field. Craftsmen want to comment on craft and designers write about design. This situation re-produces the current values and hierarchies in the fields - you tend to protect your 'own field' - although often implicitly.

Collosion or Crafts Smelting into Design?

The discourse on the barriers between design and art and design and crafts exists also in the field of textile art in Finland. In the summer 1996 the exhibition RAPORTTI / REPORT in the Craft Museum of Finland presented contemporary functional textiles designed and made by Finnish textile artists to celebrate the 40th anniversary of TEXO, organization for textile artists. In the exhibition textile artists presented their ideas about their work and about the contemporary situation in the field. Leea Haikonen, a student of textile art at the University of Art and Design in Helsinki (UIAH), wrote: "I love making things by hand, the feel of materials, and I think I shall probably always work with my hands in addition to my design work.". The comment describes the current trend towards crafts in textile art - making with own hands is considered important.

Textile art education was until the 1980's centralized to the University of Art and Design in Helsinki (UIAH). Until quite lately only designers educated in UIAH were thought of as 'real' textile artists. This, although textile design, i.e. designing patterns and models for different kinds of textiles, has been a part of the curriculum in the crafts and design education for quite long.

A reformation of craft and design education is currently going on in Finland. It will lower the fences between design and crafts. The University of Art and Design (UIAH) offers already further education for craftspeople. Originally founded in 1911 to pursue designer's issue, the national organization for design artists ORNAMO with its' member organizations (for example TEXO), has now responsed by opening their doors for persons educated in crafts and design education and working as professional craftsmen.

Not everybody understands the need to widen the field of design towards crafts. Some generations of textile artists, for example, have difficulties in taking up a view of craft and there still seems to be a need to separate 'crafts' from 'art'. The discourse has been lively in the field of textile art and other traditional areas of art-craft. In the field of textiles it shows for example in the every-day-level conversation on who is a textile artist and who is not. The dichotomy is also underlined by art history and crafts history and the contemporary criticism that often aim to distinguish good design from bad, quality craft from trash, professionality from leisure work. The difference shows in evaluations that often tend to emphasize the former - the presumed 'quality'.(see also Kälviäinen 1996)

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Products in their Ideological Context in Professional Evaluation

Abstract

In the area of crafts and design the definition of a good product can be connected with the elitist taste of the professional group. In revealing the system of professional evaluation both the concept of art world and that of cultural field were used. This method can be placed on the area of new critical theory in cultural sociology. The method was also based on complex thinking.

The definition of a professionally good product was studied so that a gradual picture was formed from the reality. The professional evaluation is influenced both by the professional organizations and institutions and by the internal value-based goals of the professional group. Through the study the method emphazised constant building of the professionally approved area of production so that the area that had been socially built in reality was rebuilt in research.

This research method was developed in a study of professional definition of a good artistic product in Finnish art craft. The taste of an artistic group was studied through the particular group which defined the acceptable art craft in professional publicity. The period that was studied was the 1980's.

A good product in professional art craft proved to be closely connected with the institutional background of the field. Even more it was connected with the internal interests of the field. This was not restricted only on aesthetics but was particularly based on moralistic and ideological thoughts. Socialization to the profession leads to a respect for the inner values of the profession. This also affects the accurate distinction obtained by experts and it is connected with the intuitive evaluation of artistic production.

Keywords: Crafts, design, art craft, evaluation, taste, art world.

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Products in their Ideological Context in Professional Evaluation

In professional activities and education of crafts and design it is interesting to notice how the professional values play an important role in the way professionals make judgements on products. To view this phenomenon closer I carried out a research which concentrated on professional definition and evaluation of the 1980´s art craft in Finland.

As a wider starting point of the research the most important one was the definition of the so-called good product in crafts and design. Since the 1970´s this combination of words had been critisized. In my research I aimed at analyzing how the target of this criticism existed. In many earlier analyses the professionally good product was connected with the concept of good taste. This research concentrated on searching for the general taste of the professional group. This taste is something that the participants of a professional system gain through their socialization to the group and to the hidden rules it has. These rules are active in the objective institutions that form a frame to the accepted ideology of the group.

In order to make an analysis of this kind of professional group taste I had to restrict the field of action I was to study. This led me to analyse the area of art craft. In this area a clear problem could be noticed because it was a border phenomen in its relation to industrial arts, more generally to design and to visual arts and traditional crafts. There were comments in the professional discussion about who was able to do art craft, it even came out that this kind of definition of production shoud be banned all together.

There were multidimensional relations and changes connected with the 1980's art craft. The tradition of functional products connects art craft with the history of industrial arts and traditional crafts. Then the movement from the functional products to contemplative exhibition items led to see art craft as visual arts. Furthermore many methods of making art craft have long traditions of craftsmanship behind them.

The restriction of the research in a good product of art craft was not born from my specific interest in art craft. Because of the many relations it had this research subject could, in my point of view, clarify also the mechanisim of evaluation in the near areas of art craft.

All this background led to a study of a professional definition of a good artistic products in Finnish art craft. The taste of an artistic group was studied in the particular group which defined the acceptable art craft in professional publicity. The period that was studied was the 1980's because at that time the postmodern discussion emphasized the destruction of values producing criticism on a professionally good product. At the same time discussion about the principles of a good product was so intensive that it gave valuable research material.

In the research in question the aim was to define a good and approved way of doing artistic crafts in the area of art, design and crafts. The definition would show the possible consensus of professional experts. The definition was studied by analyzing the use of the concept 'art craft' and the functional value-base of the field of art craft.

To emphasize the interaction of the theories and professional material I developed departure points for the research from a combination of theories that seemed to function well with the western, international, professional background which was viewed to support the reflexive analysis of the Finnish material. The chosen theories seemed to point out the important features in the international picture of the art craft professions and their production. The departure point and the research method were partly based on the concept of art world and that of a cultural field used by the sosiologist Pierre Bourdieu. The following ideas by Bourdieu were also important: distinction as a mechanism of taste, hierarchies of value and the strong demand of reflexivity in the research.

A research method that can reveal the system of professional evaluation, judgement and distinction and bring forward the main criteria of the evaluation needs to look at the evaluation process from many angles and at many levels. The method used was also based on complex thinking besides all the above mentioned departure points. The base of the professional evaluation of a good product can be studied with the help of multidimensionality, interaction and change. The subject of study in this kind of research must be interpreted to be part of a living network instead of a static subject.

The method used can be placed on the area of new critical theory in cultural sociology especially in the sense that it opened the objectivity of professional evaluation in question. Pierre Bourdieu thinks it is important that the target of the study is built throughout the study. This constant building means that the professionally approved area of production that has been socially built in reality is rebuilt in research; it is not taken for granted.

The professional evaluation is influenced both by organizations and institutions that have been shaped by the community, and by the internal and ideological value-based goals of the professional group. The contradiction of the objective and subjective knowledge has to be avoided, because they are both necessary in a covering study. The first phase is the objective study of the stuctures that form the institutional basis of the studied production, because with the help of them it is possible see how the objective world restricts the action. It also gives background to the analysis of the internal interests.

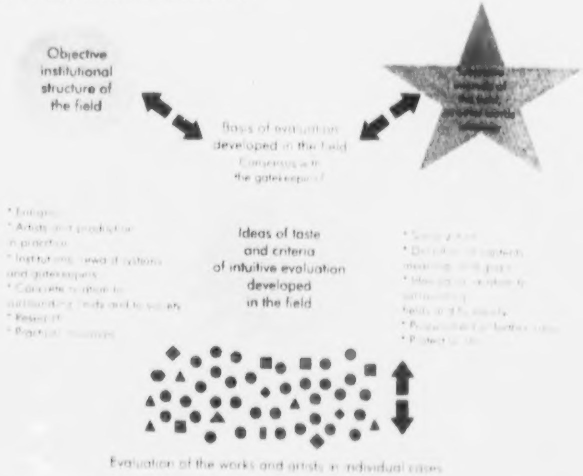
Objective institutional structure of the field
Basis of evaluation developed in the field
the gatekeepers?
* Artists and production in practice
* Institutional reward systems and gatekeepers
* Concrete relation to surrounding fields and to society
* Research
Ideas of taste and criteria of intuitive evaluation developed in the field
Evaluation of the works and artists in individual cases

Figure 1.

The features that affect evaluation in the cultural field.

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Figure 1 represents the main points of the analysis. They are the objective, institutional structure of the field and the subjective value basis of the field. Also the evaluation of the works and that of the artists in individual cases must be studied to form a picture of the criteria and taste of the professional evaluation with intuitive emphasis. Furthermore, outside this picture, it was very important to take into consideration the external relations that made change happen in the internal area for action.

The multidimensional picture of the products in professional evaluation was formed gradually and reflexively through the analysis. In the first phase the objective reality defining art craft was studied. This meant the professional artistcraftsmen in practice, their production and the institutional bonds they had. After that the study proceeded on to the subjective contents, like professional definitions of art craft, professional goals and the meanings attached to the functions of art craft.

The definition was also studied as an interactional happening. The interaction of art craft area with the nearby areas was studied. In this study phase the emphasis was put on the definition of art craft and on the place it seemed to have in the hierarchy of different kind of production.

After that the evaluation system of professional art craft was studied. This was first analyzed from the point of view of the objective structures like the institutions and their actors that had the possibility to evaluate professional art craft and also the principles for this evaluation. The evaluation criteria that they had used were grouped through analysis. The published definitions of a good product in art craft were gathered in the study as well. Through this material it was possible to study the relationship of a good product in art craft with the changes that had happened in the 1980's.

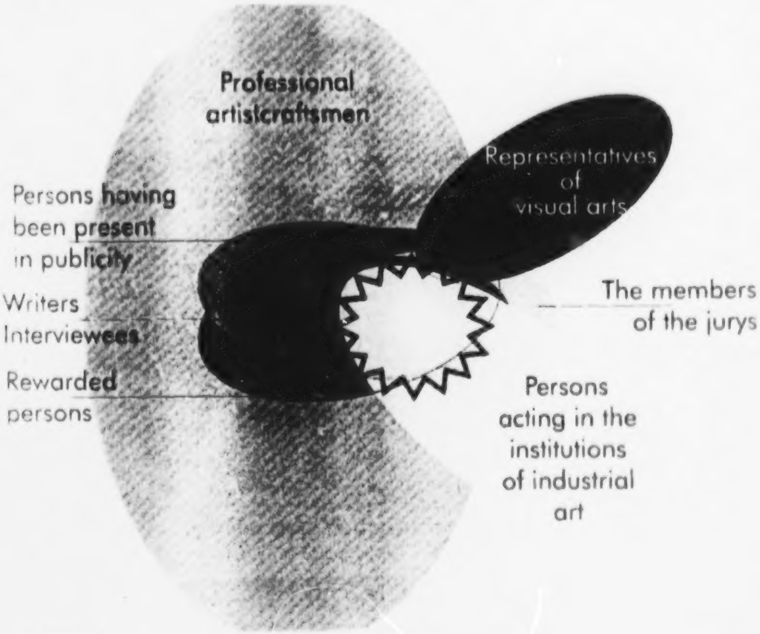
Professional artistcraftsmen
Representatives of visual arts
Persons having been present in publicity
Writers
Interviewees
Rewarded persons
The members of the jurys
Persons acting in the institutions of industrial art

Figure 2.

The main area of authority in professional art craft.

After this the picture of the professional evaluation risen from the published material was outlined by studying the forming of authority in the professional field of art craft. As the figure 2 presents this analysis showed that the authority was in the hands of the same people in many layers of different forms of institutional and artistic influence. Because there was a clear concentration and recurrence connected with the industrial arts and design institutions this emphasised the goals and values of design profession on the basis of evaluation in art craft.

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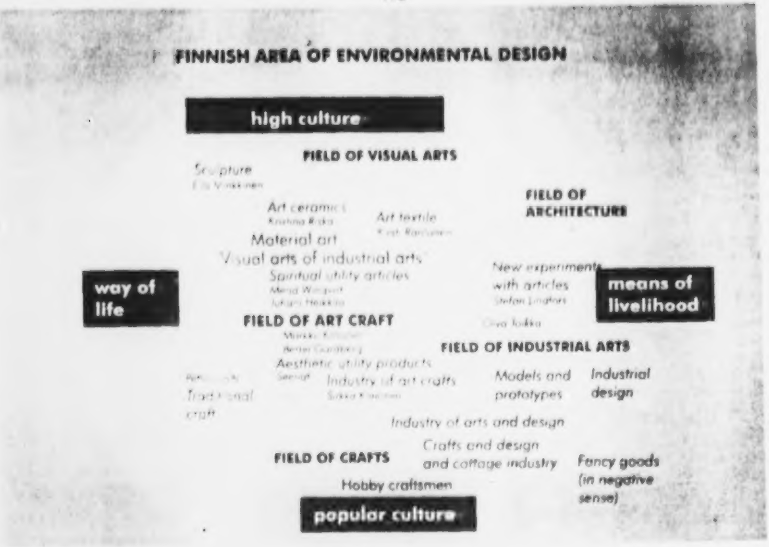

FINNISH AREA OF ENVIRONMENTAL DESIGN
high culture
FIELD OF VISUAL ARTS
Sculpture
Art ceramics
Art textile
FIELD OF ARCHITECTURE
Material art
"Visual arts of industrial arts"
Spiritual utility articles
New experiments with articles
Stefan Lindfors
way of life
means of livelihood
FIELD OF ART CRAFT
Oiva Toikka
FIELD OF INDUSTRIAL ARTS
Aesthetic utility products
Industry of art crafts
Traditional craft
Models and prototypes
Industrial design
Industry of arts and design
Crafts and design and cottage industry
FIELD OF CRAFTS
Fancy goods (in negative sense)
Hobby craftsmen
popular culture

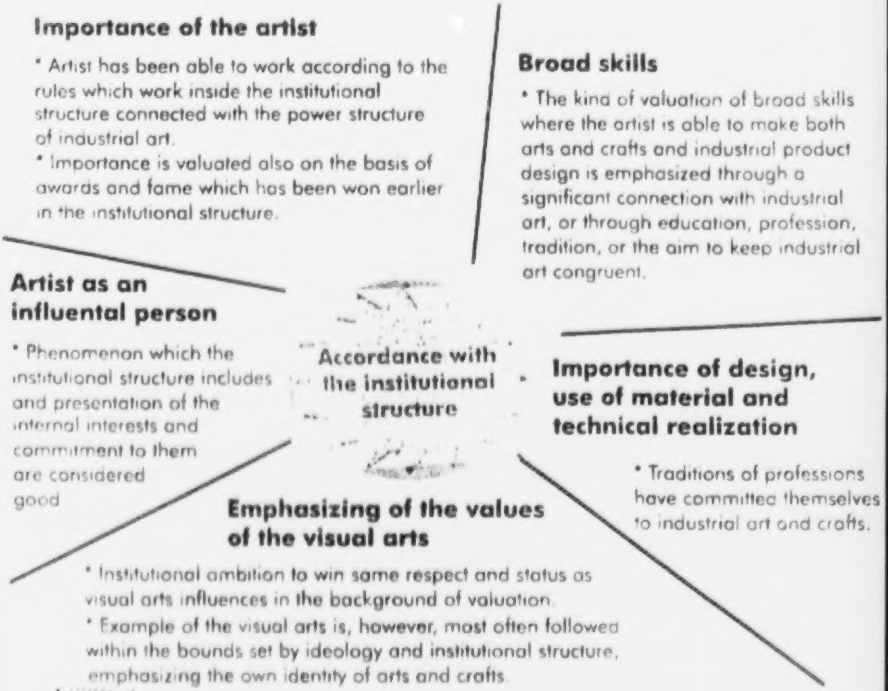
Figure 3.

The sphere of professional art craft and the areas surrounding it.

The internal sphere of the public, professional field of art craft was presented like shown in the figure 3. It was also studied how the evaluation criteria defined this sphere. As a result in defining art craft the idealistic production moved towards visual arts. However, the ideas and institutional background was still attached to industrial arts and design. The importance of traditional crafts as a way of doing things was defended but there was also some protectionism towards traditional craftsmen and especially towards hobbycraftsmen when they wanted to become professional artistcraftsmen.

Three areas of production belonged to the sphere of professional art craft: the area of aesthetic functional products, the area of products that were described as spiritual utility products and the area of works of art where the material played an important role. Professional art craft in Finland was defined at two levels. As a higher level concept it covered all this production. It was also used as a lower level concept for the area of aesthetic and spiritual products. Part of the artists working with the material works of art did not think they belonged to the area of art craft even if the emphasis of the production was artistic.

In conclusion the functions and base of professional evaluation were viewed.



Importance of the artist

- Artist has been able to work according to the rules which work inside the institutional structure connected with the power structure of industrial art.
- Importance is valuated also on the basis of awards and fame which has been won earlier in the institutional structure.

Broad skills

- The kind of valuation of broad skills where the artist is able to make both arts and crafts and industrial product design is emphasized through a significant connection with industrial art, or through education, profession, tradition, or the aim to keep industrial art congruent.

Artist as an influental person

- Phenomenon which the institutional structure includes and presentation of the internal interests and commitment to them are considered good

Accordance with the institutional structure

Importance of design, use of material and technical realization

- Traditions of professions have committed themselves to industrial art and crafts.

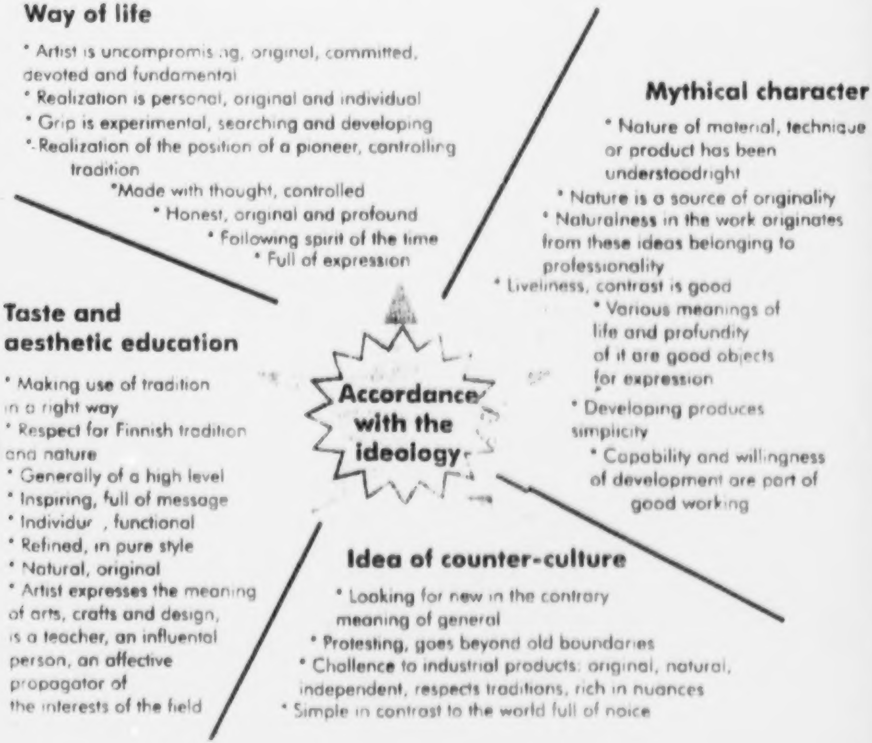
Emphasizing of the values of the visual arts

- Institutional ambition to win same respect and status as visual arts influences in the background of valuation.
- Example of the visual arts is, however, most often followed within the bounds set by ideology and institutional structure, emphasizing the own identity of arts and crafts.

Figure 4.

The evaluation criteria used in connection with the institutional background.

In this picture the criteria found for professional evaluation of art craft interact with the institutional influence. On the background of the criteria of professional evaluation one could trace the effect of the institutional emphasis of the industrial arts area and more broadly design. Also the hope to be accepted by the institutions of visual arts could be seen in some respect.



Way of life

- Artist is uncompromising, original, committed, devoted and fundamental
- Realization is personal, original and individual
- Grip is experimental, searching and developing
- Realization of the position of a pioneer, controlling tradition
- Made with thought, controlled
- Honest, original and profound
- Following spirit of the time
- Full of expression

Mythical character

- Nature of material, technique or product has been understoodright
- Nature is a source of originality
- Naturalness in the work originates from these ideas belonging to professionality
- Liveliness, contrast is good
- Various meanings of life and profundity of it are good objects for expression
- Developing produces simplicity
- Capability and willingness of development are part of good working

Taste and aesthetic education

- Making use of tradition in a right way
- Respect for Finnish tradition and nature
- Generally of a high level
- Inspiring, full of message
- Individual, functional
- Refined, in pure style
- Natural, original
- Artist expresses the meaning of arts, crafts and design, is a teacher, an influental person, an affective propagator of the interests of the field

Accordance with the ideology

Idea of counter-culture

- Looking for new in the contrary meaning of general
- Protesting, goes beyond old boundaries
- Challence to industrial products: original, natural, independent, respects traditions, rich in nuances
- Simple in contrast to the world full of noice

Figure 5.

The evaluation criteria used in connection with the internal interest of the field.

The criteria for a good product in professional art craft proved to be connected more with the internal interests of the field than with those of the institutional background. In this picture you can see how the criteria found is, one could say, the same with the internal value-basis of art craft. This was not restricted only on aesthetics but was particularly based on moralistic and ideological thoughts about the way of life and production that artiscraftsmen should have. This way of thinking consisted of aesthetic and taste education, the committed lifestyle expected from an artistcraftsman, a trend against commercialism and mythic beliefs in the orthodoxy of the professional way of producing art craft.

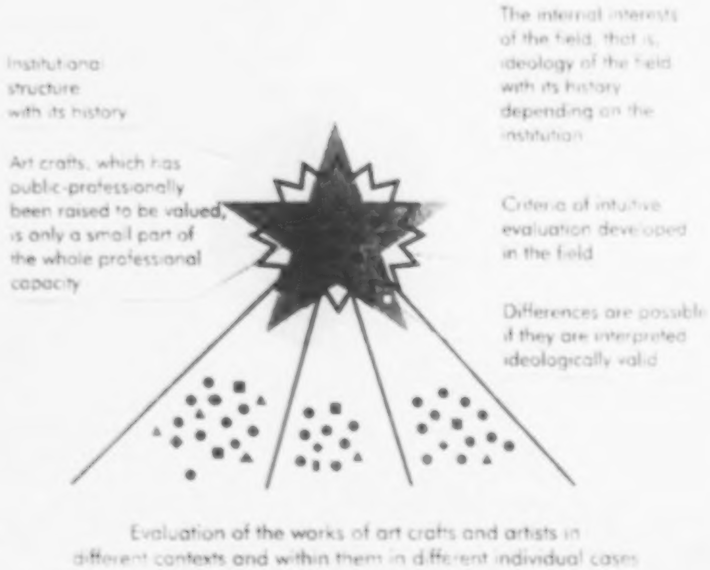

Institutional structure with its history
Art crafts, which has public-professionally been raised to be valued, is only a small part of the whole professional capacity
The internal interests of the field, that is, ideology of the field with its history depending on the institution
Criteria of intuitive evaluation developed in the field
Differences are possible if they are interpreted ideologically valid
Evaluation of the works of art crafts and artists in different contexts and within them in different individual cases

Figure 6.

The evaluation in the field of professional art craft.

As a whole, the picture of the mechanism of professional evaluation in art craft showed the importance of the institutional background and especially the importance of the internal interests of the professional activities. Both of these had roots and restrictions in their historical development. They also developed and were formed through the lively conversation with the nearby professional areas. The criteria for intuitive evaluation as a grop taste developed furthermore in a discussion with the evaluation of works of art craft and that of artist in different contexts and in different individual cases. This framework limits the possibilities of approved or new production.

In spite of the complex thinking used in this research the departure point and method used were only one possibility to approach this difficult and multidimensional research subject. The aesthetic aspect seems to commit itself to the ideological in that general level that this reseach represents. The individual viewpoint of the artist or even a jurymember is quite different. The unique work with its own right is emphazised in artist´s thoughts. It has strenght in the search for new. Instead of context the artist emphazises form in the concept of aesthetics.

The professional discussion about the material of the study suggested that in solving the problems in professional evaluation theoretical frameworks and art theory should be used. In the light of this study it should be remembered that this kind of art theories do not solve the contradictions in professional reality if the ideological value-basis defines the contents of the theories. Furthermore the intuitive expert evaluation is closely connected with the application of the theories and written criteria. Intuitive evaluation is based on the socialization to the profession, which leads to a respect for the inner values of the profession. These can and do contradict the values of other professions or groups.

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Development of the Reference Frame in Crafts Science

Abstract

Crafts science is a young university subject. During its lifetime its contents has been discussed lively. In my presentation I am going to analyse how the reference frame of the crafts science in my own work as an educator of prospective teachers in textiles, clothing and crafts design has developed. The starting point for this process seems to have been to define the meaning of the essential terms: work, working, designing, making and product. The pedagogical angle of the teacher education as well as the goals given for the education by the society mean noticeable widening of the contents of the crafts science. In the reference frame I have come to two main domains: the product and the working activity. The working activity proceeds as a complete process where both internal and external processes are closely linked up with each other.

Keywords: Crafts science, frame of references, teacher education, textiles, clothing.

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Development of the Reference Frame in Crafts Science

Introduction

My intention is to discuss how the frame of reference in crafts science has developed in my own work. The professor's chair of crafts science - the subject to be thought by teachers in textiles, clothing and craft design at school - was established at the University of Helsinki in 1982. Today the teaching domain of the chair is defined as *crafts science, especially the designing and making processes of hand-made textile products.* At the University of Joensuu, my latest employer, the teaching domain of the corresponding chair is defined as *crafts science, especially textiles, clothing and craft design.* During its lifetime the contents of this young university subject has been discussed lively which certainly has promoted its development. According to the definition of teaching, I will discuss my theme through the contents of textiles, clothing and craft design.

Studies at the university should give students relevant preparedness for tasks to accomplish at school as teachers. The academic contents of the crafts science have kept me thinking since the chair was established in 1982. Since I was retired in the end of 1995 I could perceive that the development of the reference frame in my teaching has been a continued process and was completed step by step.

Defining the Term 'Work'

The first step was to define the term 'work'. Its meaning is dual (Figure 1). It means both working activity and the object of working, in other words, materials to be worked or the ready made end use product. Working activity means two content domains: designing and making. Textile materials are involved tightly in the working activity throughout the whole process: in designing at first as mental pictures later on as concrete pieces of materials; in making as objects of working and finally a ready made artefact. (Pietikäinen 1985)

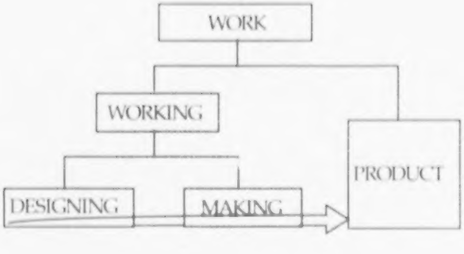

Figure 1.

Definition of the term 'work' (Pietikäinen 1987).

Working Activity as an Entire Process

But what does the working activity mean? Isn't it much more than just what we are able to see. To be successful in her profession the teacher needs to know all dimensions which affect human activity, using other words, to understand the entire character of the working activity.

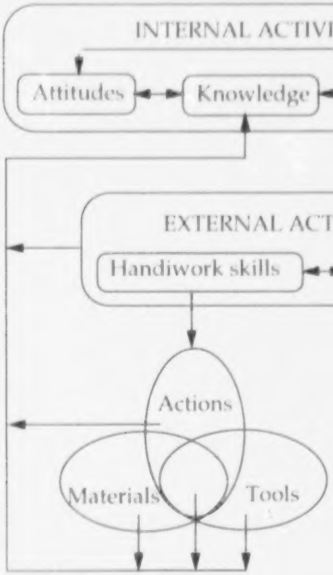
INTERNAL ACTIVITY
Attitudes
Knowledge
Abilities
EXTERNAL ACTIVITY
Handiwork skills
Other skills
Actions
Materials
Tools

Figure 2.

The psycho-physical nature of working activity (Pietikäinen 1987)

I have interpreted working activity as a psycho-physical process (Figure 2). It proceeds both on a psychical level, in other words, a cognitive level and on a physical level. The cognitive activity orientates and develops models for the individual's external activity and varies the original, anticipated model along with the advancing process, always according to the needs. The internal model is built upon the ability, knowledge and attitude reserves of the individual. (Pietikäinen 1985, 1987)

Success of the external activity, the working skills, indicates how exact the internal mode is, in other words, how well the model corresponds with the reality. Materials to be worked, tools, the worker's actions and interactions between these three make up the components of the external activity. Skillful working presupposes relevant knowledge about all of them, ability to act properly fitted to the purpose and a positive attitude in regard to carry out the work.

Working activity increases the knowledge reserve which will lead to developed abilities and to improved attitudes. This results in a developed internal model as well as in better quality of the external working process. In other words, we learn new skills. The teacher's role in this process is to contribute and increase the knowledge reserve. The entire working process proceeds as a spiral; increases the knowledge reserve, develops the internal model as well the manual skills.

Design Process

My next step in developing the frame of reference seems to examine the word 'design' (see Figure 1). Which are the contents when teaching design?

Designing is working activity, in other words, all what I said about the working activity as a psycho-physical process also concerns designing. In literature there are a plenty of different diagrams of the design process. Most of them describe the designing activity as a cyclical proceeding process.

But what is the design process aiming at? Doesn't it finally mean that we are searching for goals of designing and for means to carry out the goals? Victor Papanek describes the goals of product design with an interaction between six factors (Figure 3) where all the factors, when thinking of function are of equal importance (Papanek 1995). Papanek's model is widely accepted.

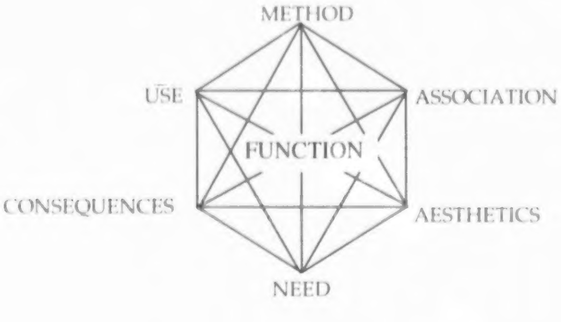

Figure 3.

Papanek's function diagram (Papanek 1995).

But how about the concrete tasks to carry out the goals of designing. To clarify this problem I arranged the contents of designing textiles in a diagram (Figure 4). The designing itself can be organised into five design tasks: visual design, material design, structure design, making design and economic design. There are different means to carry out each of these tasks. On the other side of the scheme we can see the goals of designing which are the six functions of Papanek's model. The designer works in this field. She carries out design tasks using design means and strives for the goals desired by consumers. (Pietikäinen & Sipola 1988)

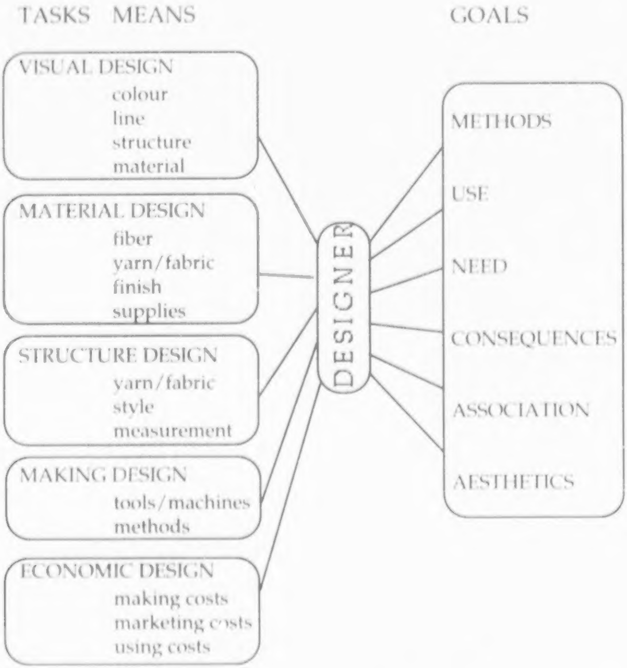
TASKS
MEANS
GOALS
VISUAL DESIGN
colour
line
structure
material
MATERIAL DESIGN
fiber
yarn/fabric
finish
supplies
STRUCTURE DESIGN
yarn/fabric
style
measurement
MAKING DESIGN
tools/machines
methods
ECONOMIC DESIGN
making costs
marketing costs
using costs
DESIGNER
METHODS
USE
NEED
CONSEQUENCES
ASSOCIATION
AESTHETICS

Figure 4.

The designer's tasks, design means and design goals. (Pietikäinen & Sipola 1988)

The means to carry out the design tasks are to some extent covered by each other. We know for example that a general visual impression results from the interaction between colour, line, structure and material. However, both material design and structure design have their own specific design tasks in such a way that they serve also many other design goals not just the visual impression.

Besides all of that the design process has a further characteristic. There are a great variety of different design problems: some of them have a clearly stated final outcome, others have many different alternative solutions. It is also typical that designing includes problems which can not be solved by drawing logical conclusion. Solving the latest problems presupposes creative thinking and the solution is a result of a creative process.

Teacher Education in the Society

By now I have dealt with separate themes of the reference frame. But this is how the development has proceeded.

The crisis and the deep economic depression in the beginning of this decade gave reasons to think about education as a part of the society. The future of the crafts science as a university subject was discussed as well as teaching textiles, clothing and craft design at school. These facts added a new dimension to the development of the reference frame (Figure 5). The society finances teacher education and school systems. Teacher education provides services for the society: for students - with other words - for prospective teachers; for school; through the teachers to school children;

and through the children to the society. In my opinion teacher education has the most central role in this circular. The teacher educator should be able to prejudge future needs of the society and also develop education accordingly to them.

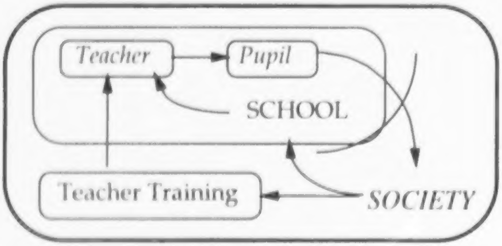

Figure 5.

Teacher education in the society.

At this point of my development process I felt that none of my previous schemes was sufficient to illustrate the contents entity of crafts science at the Finnish teacher education. Finally, I end up with a scheme where I put together all the contents presented before (Figure 6). Then I made up the scheme with such further contents that, as I think, in our society are supposed to be included in the textiles, clothing and craft design education.

The frame of reference has two domains: working activity and the artefact - in other words - the product. Working activity includes external and internal processes. In an actual working situation the contents of the external and internal processes are in a close, continuous interaction. The external contents are those which we can observe with our senses.

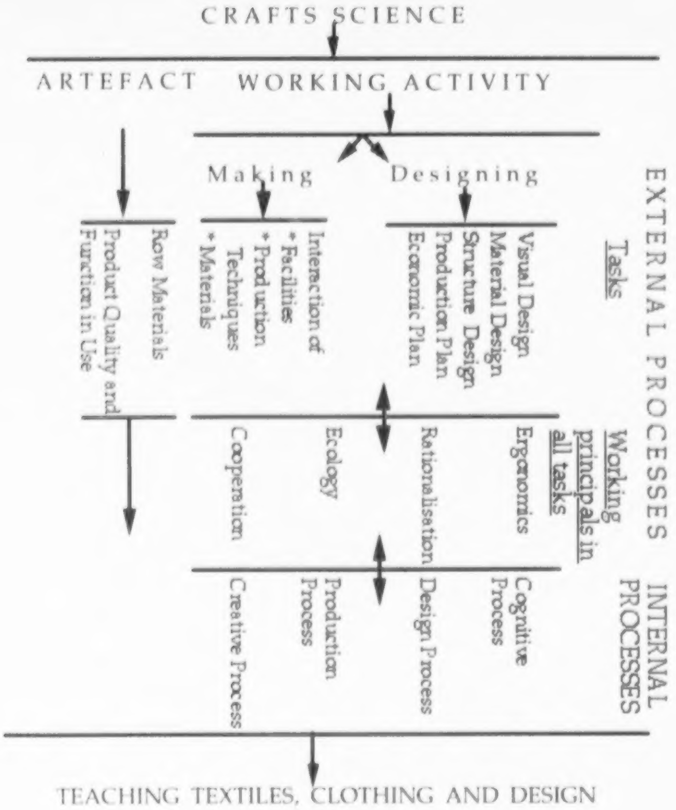
CRAFTS SCIENCE
ARTEFACT
WORKING ACTIVITY
Making
Designing
EXTERNAL PROCESSES
Tasks
Visual Design
Material Design
Structure Design
Production Plan
Economic Plan
Interaction of
*Facilities
*Production
Techniques
*Materials
Row Materials
Product Quality and
Function in Use
Working
principals in
all tasks
Ergonomics
Rationalisation
Ecology
Cooperation
INTERNAL
PROCESSES
Cognitive
Process
Design Process
Production
Process
Creative Process
TEACHING TEXTILES, CLOTHING AND DESIGN

Figure 6.

The frame of reference in crafts science.

The external processes include designing and making activities. Further analyses on the external processes gave the tasks to be carried out in designing (compare Figure 4) and the components of the external activity in making (compare Figure 2) and such common principals which deal with an essential part in all kinds of working.

The working principles in all tasks are an important part of work education. They are principals to always be considered in working. We can say that these contents also well respond to the demands of the society.

The internal processes develop along with the working activity. All of them can be described with a spiral structure. The factors which affect these processes were stated earlier (see Figure 2).

The object of the working activity - the textiles - was the other domain of the reference frame. Textiles make central contents throughout the processes from the beginning of designing to the end of making. Which materials are selected? How do the materials behave in making? How can we make a textile product of good quality? And so on. And what do we mean when we speak about a quality product which functions well in its final end use? It is information what designers, makers and consumers need.

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Revealing Design Thinking Through Protocol Data

Abstract

The purpose of the present paper is to provide an overview of recent developments in protocol-analysis studies as applied in the research of design thinking in general and the study of weaving design in particular. First, this paper analyzes expertise in weaving design from the viewpoint of cognitive science. The weaving design is seen as a complex problem-solving process requiring domain-specific knowledge of the principles of weaving as well as more domain-general knowledge of visual design. The process of weaving design is characterized as a dual-space search. Thus, weaving design is divided into two design spaces: composition space, which represents visual designing; and construction space, which represents technical designing. Second, this paper will focus on the methodology of protocol data in the analysis of design thinking.

Keywords: Design process, design thinking, dual space search, protocol analysis, thinking aloud method, problem behaviour graph.

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Revealing Design Thinking Through Protocol Data

Introduction

The purpose of this paper is to provide an overview of recent developments in protocol-analysis studies as applied in the research of design thinking in general and in the study of weaving design in particular. The weaving design is seen as a complex problem-solving process requiring domain-specific knowledge on principles of weaving as well as more domain-general knowledge of visual design. First, the author will analyze expertise in weaving design from the viewpoint of cognitive science. Cognitive science is a multidiciplinary study of the research focused on studying higher-level cognitive processes such as thinking, reasoning, problem solving and expertise. Second, the paper will focus on the thinking-aloud method and methods of analyzing protocol data.

Cognitive science provides a very promising framework for research the realm of design (Simon 1969, 1973, 1977; Rowe 1987; Goel & Pirolli 1992; Akin & Lin 1996, for an overview of cognitive science, see Gardner 1985). Recently, the studies of design processes and design thinking have became very intensive areas of investigation (Akin 1986; Akin & Lin 1996; Dorst 1996; Goel & Pirolli 1992; Goldschmidt 1996). One of the most important focuses of cognitive science is how experts solve problems in their own domain of knowledge. Accordingly, the recent studies of design processes focuse on what kind of knowledge and design methods designer's use while solving complex, ill-defined design problems. Cognitive science furnishes at least three lines of inquiry which suggest possible research directions for understanding design processes.

Firstly, the cognitive science has well-developed concepts and a very advanced theoretical framework for analyzing and studying design process as a form of complex problem-solving (Simon 1969, 1973; Goel & Pirolli 1992). Furthermore, methodologies specific to cognitive science, especially protocol analysis, have stimulated empirical research on the design process (Akin 1986; Akin & Lin 1996; Eckersley 1987; Chan 1990; Goldschmidt 1996; Seitamaa-Hakkarainen in press). The thinking-aloud method (i.e., protocol analysis) makes an analysis of the designers' internal thought processes attainable. Finally, the cognitive framework allows for the discovery of valuable information regarding knowledge structures and processes that enable an experts' higher-level performance (Chi, Glaser & Rees 1982; Chi, Glaser & Farr 1988; Ericsson & Smith 1991). Studies of expertise extend our understanding of complex processes of knowledge-based problem-solving and thus provide categories and concepts for analyzing and conceptualizing design processes and the development of design expertise.

Design requires a large amount of highly organized knowledge about the principles and practices of the domain in question. The iterative nature of the design process (Zeisel 1984; Akin 1986; Anttila 1993) and the control structure and constraints applied to designing are explained in design literature (Akin 1986; Akin & Lin 1996; Chan 1990; Goel & Pirolli 1992).

These valuable contributions to the explanation and understanding of design processes can be summarized as follows:

1) Design is a strongly goal-directed activity in its nature and involves higher-level cognitive processes;

2) The process of design includes certain abstract structures, elements and heuristics which are common to all design tasks. Nevertheless, all design areas also rely on domain-specific knowledge, methods and techniques, whose mastery provides an important precondition for effective and successful designing;

3) Design is a form of complex problem solving. In the process of design, an ill-structured initial state is transformed into a more structured state by decomposing the complex initial problem into manageable sub-problems.

4) Design is an iterative process in which emerging solutions are achieved by continuously structuring and restructuring, composing and decomposing the problem space. Problem structuring and restructuring happens by applying general and domain-specific heuristic methods which make it possible to limit the huge problem-space;

5) Defining and redefining the constraints of the design reduce the search in the huge problem-space and help to focus on workable alternatives. Constraints of the design form a frame for the design, directing the designer's attention.

6) Through perceiving and testing external representations (drawings, notes, samples, prototypes) the designer is able to evaluate whether the current goal has been achieved and whether the solution satisfies all requirements.

7) Design expertise is based on hierarchical knowledge structures including conceptual, visual and procedural knowledge. These knowledge structures contain information on general principles as well as specific instances.

Weaving Design as Dual Space Search

Weaving design is a complicated long-term creative process. The pivotal aspect in the weaving design process is the gathering and utilization of domain-specific knowledge in conjunction with the visual and technical characteristics of the desired textile. Thus, the main problem in weaving design process is the concretizing and realizing of visual ideas. Given this as a starting point, the knowledge of traditional weaves, models and techniques of weaving, the study of materials and their interrelationships, and the organization of visual elements then become crucial in bringing the textile into the realm of the tangible.

The most important prerequisite for the development of the design model is an analysis of the design elements, i.e., those general aspects of weaving design that necessarily characterize all weaving-design tasks. In the author's first study these basic elements of the weaving design process were reported, and the author analyzed qualitative differences between experts' and novices' weaving design (Seitamaa-Hakkarainen in press). These results suggested that experience with the technical principles of weaving as well as familiarity with materials and weaving procedures are essential to the designing of woven textiles. Previous results also indicated that the novices' competence in visual design is often not adequate to solve juxtaposed technical and practical problems. The difference between experts and novices was that the novices' proceeded in a serial manner. In contrast, the experts' were able to integrate both the visual and technical elements of weaving and consider them in a parallel fashion during their designing process.

The process of weaving design is conceptualized as a *dual-space search* through composition and construction spaces with respect to specified weaving-design elements. The original idea of the two spaces of human problem solving was introduced by Simon and Lea (1974) as a space of instances and a space of rules. Moreover, analyzing scientific thinking Klahr and Dunbar (1988; Dunbar & Klahr 1988; Kulkarni & Simon 1990; for a corresponding conceptualization in the area of literate expertise, see Bereiter & Scardamalia 1987) argued that scientific thinking happens as an interaction between the two problem spaces, the hypothesis space in which ideas are generated and the testing space in which they are tested.

Consideration of the nature of weaving design naturally supports an analogous idea that interaction between visual processing and its technical operation forms the basis of skillful designing. The basic elements of visual design or the constituents of composition space are: shape, color and pattern. Corresponding elements of technical space or constituents of construction space are: material, structure and production procedure. The former space represents a more domain-general knowledge of visual composition while the latter requires the domain-specific knowledge of the construction of woven textiles. These elements are considered at different levels of detail during the process of weaving design. Moreover, the integration of both aspects is required for planning and producing a complely woven textile. In Figure 1 the dual-space search model of weaving design is presented:

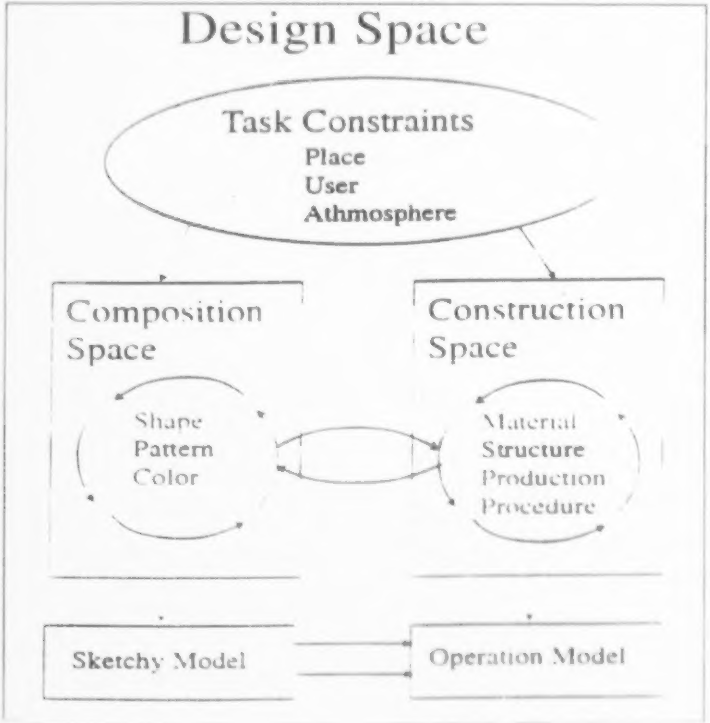
Design Space
Task Constraints
Place
User
Athmosphere
Composition Space
Shape
Pattern
Color
Construction Space
Material
Structure
Production
Procedure
Sketchy Model
Operation Model

Figure 1.

Dual space search model.

Primarily, the model developed here characterizes design process as a serial processing or parallel processing within and between those two design problem-spaces. *Serial processing* means that designing happens by considering only one problem space at a time, i.e., a designer first tries to solve a visual problem, and after that moves to the problem of the construction of visual ideas. *Parallel processing* means that a designer simultaniously considers both visual and technical aspects of a design problem in a given period of time; these aspects of design are more integrated. Moreover, the interaction between the spaces is seen as an iterative and cyclic process in nature. This is partially based on the fact that design elements are incrementally increasing during the designing (Goel & Pirolli 1992; Abelson & Soloway 1988).

Design space refers to the whole design task environment, which is common to all prototypical design problems (Newell & Simon 1972; see also Goel & Pirolli 1992). Generally, the design space is ill-defined in the sense that there are no definite criteria for testing whether a proposed solution is successful or not. Moreover, the design space cannot be defined unambiguously. The designer has to structure and limit the huge problem-space by using *task constraints*. The task constraints are taken and interpreted from the information in the design task i.e., design brief, architectural plan, ect. or they are drawn from the designers' previous experience.

The visual design process yields visualization of the weaving product as a *sketchy model* of the design. Searching in the construction space provides a realization of the sketchy model as an *operation model* of the product. Sketchy model refers to the arrangement of visual elements which provides a hypothetical frame of the weaving product in a visual form. The sketchy model as such does not provide information on how this drawing can be executed by weaving. Operation model refers to the arrangement of technical elements which provides an increasingly more concrete model of the weaving product.

Klahr and Dunbar (1988) argue that qualitative differences in subjects' behavior could be interpreted in terms of these differences in how they divided the search between the two spaces. A corresponding prediction can be made concerning the nature of expertise in weaving design. Given the rationale outlined above, the primary research objective of the present study was to test the dual space model by; 1) analyzing the nature of the weaving design process; 2) analyzing the role of the design constraints, and; 3) comparing differences between design processes of competents and experts.

In the following section the author will describe methods in data analysis applied in the ongoing study. However, result analysis has not yet been completely carried out so therefore at this point in time the final result cannot be presented in full. Its focus will be on methodological issues.

Research Method and Experimental Procedure

In this ongoing research a case study strategy was applied. The case study provides in-depth information about a few cases, and it is the only practical and common way of studying expertise. The small-scale design task was designed to reflect general and stable features of the weaving design tasks.

Eight subjects, four professional weaving designers, and four students of textile were used in the study. Each subject had a similar kind of education, specializing in weaving design, though they had somewhat varying working experiences. The subjects participated in two design sessions, which were limited to one hour each. The design task was to design wall-hanging textile for the planned kindergarten called 'Little Prince'. The subjects also received some additional information such as: an architectural plan, staircase drawing, and the architect 's description of the planned kindergarten.

The research method was a thinking-aloud method. Thinking aloud requires that the subject think aloud from the beginning of the problem solving to the end. The thinking-aloud experiments were arranged in a silent, laboratory-like room. The experiment was arranged individually for each of the subjects following a similar procedure. The subjects were allowed to use all design materials they needed in their design work.

Sessions with the subjects were recorded on videotape in order to make comparisons of the verbal report with observed activity. Further, the subjects' sketches and notes were included in the study material. One of the more important aspects of design protocol studies to examine is the relationship between two forms of data such as verbal-conceptual and visual-graphic. Accordingly, the relationship between verbal and visual data will be given a special consideration in this ongoing study.

Method of Analysis

Following data collection, the recorded protocols were transcribed according to the audiotapes. The verbal protocols were cross-referenced with the activity seen on the videotapes. Transformation of the verbal reports and the cross-referencing of motor activities and drawn documents consisted of the following steps.

First, the audiotapes of the verbal reports were transcripted word by word. The transcripted protocols were divided into statements using two methods. The first method of segmentation was to use non-content cues such as pauses or any period of silence longer than 10 seconds. The second was to use cues representing the meaning of the content. Each statement conveyed a single thought or idea. Through the application of both methods there was provided a very fine grained segmentation of the verbal protocols.

Second, the relationship between verbal protocols, motor activities and drawn documents was examined. The systematic observations of the video protocol were made manually in two minute intervals. The observational procedure consisted of labeling as detailed observations as possible of the subject's main motor activities and main focus during every two minute period. Also, development in the subjects' sketch was identified. Because there are usually gaps (periods of silence) found in most protocols it is important to find out what the subject actually does (Akin & Lin 1996; Lloyd, Lawson & Scott 1996). These gaps are significant, especially for design protocols, when subjects have to encode visual representation or to concentrate on motor activities. Finally, each subject's verbal reports, motor activities, drawn and written documents were cross-referenced.

Problem Behavior Graphs and Description of the Design Process

As stated above, subjects' verbalized thoughts were divided into statements representing single thoughts or main ideas, that is; the meaning of the content. Each subject's design process was analyzed by using qualitative content analysis and problem-behavior graphs. Only the problem behavior graphs will be introduced in this paper. Problem-behavior graphs are necessary for analyzing and understanding the sequential moves of the design elements and the progression of the design process. Moreover, from the problem behavior graphs it is easy to notice the assumed parallel processing of design elements. First, a symbol system was developed on the basis of a careful analysis of the protocols. The symbol system describes design elements, constraints, and their relationship in order to analyze the subjects progression in the design problem space. In sum, the problem behavior graph represents each of the ideas that the subject verbalized during the design process.

The starting point of anlyzing the design prosess was a design episode, that is, a period during which similar elements of design work were carried out. *Design episodes* describe segments of activity aimed at reaching a certain goal; and are usually decisions concerning design elements. Each episode contains a unique goal (design element) that will be strucutred and solved during an episode. When the goal is accomplished or changed that design episode ends.

The results of the subjects' design processes are presented in two levels. First, the whole design process is descripted at Alternative --level in the Figure 2. The Figure 2 shows subjects' whole design process in the first design session, time used for each of the sketches, as well as type and number of each sketch. Inside the sketches the design episodes are presented. In the beginning of problem solving a subject's thinking sketches consisted of only one episode (design element) but later during the process an alternative consists of more design episodes.

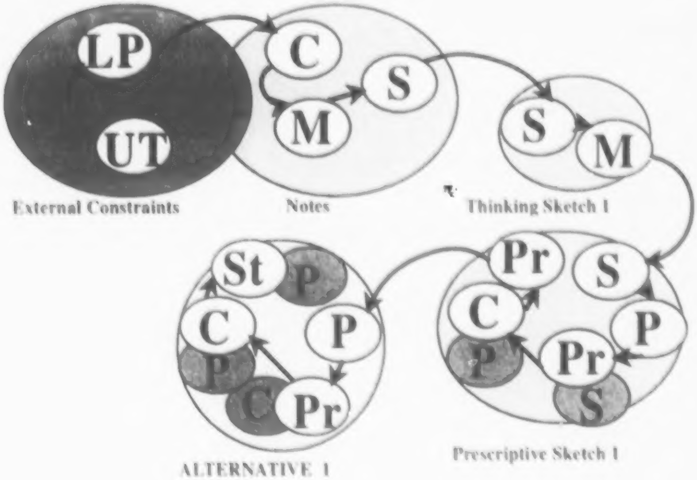
LP
UT
External Constraints
C
M
S
Notes
S
M
Thinking Sketch 1
Pr
S
C
P
P
Pr
S
Prescriptive Sketch 1
St
P
C
P
P
C
Pr
ALTERNATIVE 1

Figure 2.

Subject's Design Process in Stage 1.

The second level description reveals the main elements processed within an episode in Figure 3. The second level description is aimed to identify

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the moves between design spaces and an assumed parallel processing of the visual and technical design elements. This also shows clearly how designers iteratively develop their solutions. It shows how designers jump between design spaces and how some elements have been increasingly considered many times.

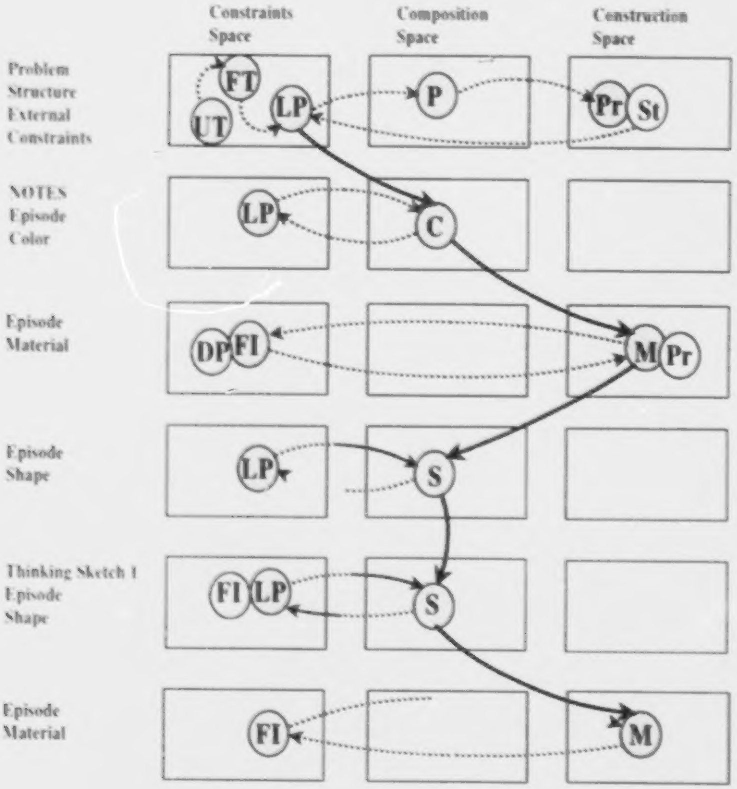
Constraints Space
Composition Space
Construction Space
Problem Structure External Constraints
NOTES Episode Color
Episode Material
Episode Shape
Thinking Sketch 1 Episode Shape
Episode Material
FT
UT
LP
P
Pr
St
LP
C
DP
FI
M
Pr
LP
S
FI
LP
S
FI
M

Figure 3.

Designing between design spaces.

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Discussion

This ongoing study is an attempt to analyze the nature of weaving design using protocol analysis as a research tool. The experiment showed that the thinking aloud method can be productively applied for analyzing the process of weaving design. The subjects produced verbalized thoughts very fluently. Moreover, the subjects' verbalizations advanced in a meaningful and consistent way, providing detailed knowledge concerning the processing of design elements and an articulation of a series of alternative solutions.

Weaving design processes were analyzed by problem-behavior graphs. The construction of each subject's problem behavior-graph is based on a very detailed (fine-grained) qualitative analysis of the elements of visual and technical design and their relationship. The protocols were segmented into individual statements that conveyed a single idea or thought. This was conducted by using content clues so that each statement could be discriminated through ~~by~~ the modification of design elements or new points being made about design elements. In order to increase the reliability and validity of protocol analysis, the verbalized thoughts were related with those activities seen in the video recordings (at two minutes intervals) as well as with the original sketches, notes and drawings produced during the experiment. These procedures made it possible to insure that the verbal protocols were relevant to the task.

The assumption of the present study is that the design space can be seen to consist of two kinds of spaces; namely, composition space and construction space. During the process of design, elements in both spaces are manipulated and transformed into a more detailed state to create a workable design. During each design episode a particular design goal is activated either in composition space or construction space. The design element is manipulated in this space at an appropriate level of detail. Further, a design element can be connected to other elements in this particular space or developed many times. The progress of the design seems to happen through a series of gradually deepening cycles. Moreover, as pointed out in the cognitive and design literature (see Akin 1986; Chan 1990; Goel & Pirolli 1992), partial solutions are generated and tested many times during the process. By repeating the search process, the design gradually advances toward a final solution.

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Grounded Theory - Two Different Ways of Coding

Abstract

In this paper I will concentrate in one main element on Grounded Theory (GT), namely in the coding process. I will explicate that its seems that we have a main attitude of coding in Constant Comparative Method (CCM). In GT we can see two different ways to practice this CCM namely the Clasers and Strauss' way of coding. One quite clear difference between these two is that Strauss' have developed quite structural way of coding on the contrary to Glasers way, that concentrates more to give advice to analyst in quite general level.

Keywords: Grounded Theory, Constant Comparative Method, coding.

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Grounded Theory - Two Different Ways of Coding

Introduction

This paper is about Grounded Theory. At first I will very shortly discuss about some main principles of Grounded Theory and after that I will concentrate to explain how I understood the Glasers and Strauss' ways of coding in Grounded Theory. The names for these coding procedures were given after the authors that have developed and written about these procedures. These names were given to help reader to more clearly and quickly separate which process is in the focus.

Grounded Theory is a method of doing analysis and also the outcome of that process. Grounded Theory as an analysis method develops when a researcher uses it for forming a Grounded Theory. The main purpose of doing Grounded Theory, or shortly GT, is to create and develop new sociological or educational theories. The word theory refers to the database about the research target. These theories can been empirical, then called as Substantive Theories or more theoretical level then called Formal Theories. The main difference between them is, literally, that the Formal theory is more abstract than Substantive Theory. Both of them are

Grounded Theories. Barney G. Glaser and Anselm L. Strauss are the inventors and developers of Grounded Theory - method. In year 1967 they wrote together a book *The Discovery of Grounded Theory*. Glaser wrote 9 years later a book of *Theoretical Sensitivity*, which was a supplement to the first book, Discovery of Grounded Theory (1967). It concentrated in the development of the necessary theoretical sensitivity of the analysts. Strauss wrote two books: the first was *Qualitative Analysis for Social Scientists*, (1987) that he wrote alone and the second was *Basic of Qualitative Research* which was written with Corbin. At this time it was clear that Glaser and Strauss had different ideas about how to do Grounded Theory. Glaser wrote a *Basics of Grounded Theory Analysis* as a answer to Strauss' and Corbins book.

The CCM as the basic element of doing analysis

One field were the difference between Strauss and Glaser way of working is evident in the procedure of coding. Both men has Constant Comparative Method (CCM) on the background. This CCM was introduced in the first book *Discovery of Grounded Theory*.

CCM is divided in four stages: The first stage is comparing incidents applicapple to each category. The analysts starts generating his theory by coding each incident in his data into as many categories of analysis as possible, as categories emerge or as data emerge that fit an existing category. In this first stage there is one basic rule of CCM. "While coding an incident for a category, compare it with the previous incidents in the same and different groups coded in the same category", that guides the analysts. The constant comparisons of the incidents begins to generate theoretical properties of the category. The analysts thinks in the terms of the full range of types or continua of the category, its dimensions, the conditions under which it is produced, or minimized, its major consequences, its relation to the other categories and its other properties. (Glaser & Strauss 1967, 105 - 106.)

When categories and their properties emerge, the analysts will discover two kinds categories, firstly those that he has constructed himself and secondly those that have been abstracted from the language of the research situation. At the same time when theory develops, the analysts will notice that the concepts abstracted from the substantive situation will tend to be current labels in use of actual processes and behaviours that are to be explained while concepts constructed by the analysts will tend to be explanations. (Glaser & Strauss 1967, 107.)

When coding his material the analysts will face some conflicts for example two categories begins to get closer with each other. When these conflicts do emerge the analysts should follow the second rule of CCM. "Stop coding and record a memo on your ideas". This way it is possible to tap the initial refreshness of the analysts theoretical notions and to relieve the conflict in his thoughts. The analysts should take as much time as necessary to reflect and carry his thinking to its most logical conclusions. (Glaser & Strauss 1967, 107.)

The second stage is integrating categories and their properties. In this stage the constant comparison of incident to incident changes to comparison of incident with properties of the category that resulted from initial comparisons of incidents. Constant comparisons causes accumulated knowledge pertaining to a property of the category to readily start to become integrated, that is, related in many different ways, resulting in a unified whole. The diverse properties themselves start to become integrated. (Glaser & Strauss 1967, 109.)

In CCM third stage, delimiting the theory, delimiting occurs in two levels, the theory and the categories. At firsts the theory solidifies in the sense that major modifications become fewer and fewer as the analyst compares the next incidents of the category to its properties. Modifications are mainly on the order of clarifying the logic, taking out unrelevant properties into the major outline of interrelated categories and - most important - reduction. By reduction it is meant that the analyst may discover underlying uniformities in the original set of categories or their properties and can then formulate the theory with smaller set of higher level concepts. This way the amount of terminology and the text is diminishing. With reduction of terminology and consequent generalizing forced by constant comparisons the analysts starts to achieve two major arguments of theory firstly the parsimony of variables and formulation and secondly the scope in the applicability of the theory to a wide range of situations while keeping a close correspondence of theory and data. The second level of delimiting of theory is a reduction in the original list of categories for coding. As the theory grows, becomes reduced, and increasingly works better mass of qualitative data, the analyst becomes committed too it. His commitment now allows him to cut down the original list of categories for collecting and coding data. Another factor which still further delimits the list of categories, is that they become theoretically saturated. This means that after analyst has coded incidents for the-same category a number of times, he learns to see quickly whether or not the next applicable incident points to a new aspect. If the answer is yes, the incident is coded and compared. If the answer is no, the incidents is not coded since it only adds bulk to the coded data and nothing in the theory. (Glaser & Strauss 1967, 110 - 111.)

The forth stage is writing the theory. At this stages in processes of qualitative analysis, the analyst possesses coded data, a series of memos and a theory. The discussion in his memos provide the content behind the categories, which become major themes of the theory later presented in papers or books. Memos are summarized and further analyzed before writing about it. (Glaser & Strauss 1967, 113.)

CCM, as I have understood it, includes the attitude how to analyze the data. The coding procedure are the concrete working ways. In other words CCM is a more abstract level than coding procedures. Both men have introduced the ways of coding.

Glasers way of coding

Glaser has two main procedures of coding: Substantive coding and Theoretical coding. Glaser names two type of codes: substantive codes and formal codes. Substantive codes conceptualize the empirical substance of the area of research. Theoretical codes conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into the theory. (Glaser 1978, 55.)

Substantive coding includes two phases: open coding and selective coding. In open coding the goal of the analysts is to generate an emergent set of categories and their properties which fit, work and are relevant for integrating into theory. To achieve this goal the analysts begins with open coding, which is coding the data in every way possible. The analyst codes for as many categories that might fit: he codes different incidents into as many categories as possible. (Glaser 1978, 56.) There are six rules that guide open coding:

First rule is to ask a set of questions of data which must be kept in mind from the start. One important question to ask is: "What is this data study of?". The second question is "What category does this incident indicate?". The analysts can also ask "What category or property of category, of what part of the emerging theory, does this incident indicate?" or "What is actually happening in the data?". These questions forces the analysts to the generation of core category. The second rule is that the analysts should analyze the data line by line constantly coding each sentence. The line by line approach forces the analysts to verify and saturate categories, minimizes missing an important category, produces a dense rich theory and gives a feeling that nothing has been left out. The third rule argues that the analysts must do his own coding. If somebody else than the analysts does the coding he should have coding list, but it is impossible to make before the analyze starts. The fourth rule tells the analysts to always interrupt coding to memo the idea, so that the input from reading the data carefully and from asking of it the questions that were presented in first rule. The fifth rule suggests that the analysts should stay within the confines of his substantive area. If the analysts move too quickly from his own area to broader theoretical context he can very easily get drailed from the relevance, fit and workability, since what is core in other substantive areas will differ from his area. After he is sure of the relevance, fit and workability of his initial conceptual framework, then he can start comparisons with other kinds of data in other substantive areas to help enrich the theoretical content of his substantive theory - as opposed to using outside data to develop a formal theory. (Glaser 1978, 57 - 60.) The sixth rule states that that analysts should not assume the analytic relevance of any face sheet variable (e.g sex, social class) until it emerges as relevant.

Open coding carries with it verification, correction and saturation phenomenon. When the analysts gets deep into the data, he discovers that all data can be subsumed as an indicator of some category in he analysis. Later in the study nothing occurs as a surprise after constantly comparing, analyzing and generating, sufficient codes to handle differential emergents. In other words a total saturation occurs all data fit. (Glaser 1978, 60.)

Since the theory must be grounded verifying its fit and relevance requires patience in going over and over the data to be sure it works with ease, before secure investment is taken in selective coding for on a core variable. (Glaser 1978, 61.)

Interesting point is that in *Theoretical Sensitivity* (1978) Glaser uses the term core variable when in other books the term core category is more used. But from the context when can conclude that he refers the same phenomena.

The second stage of open coding is selective coding. It is often wise to delimit the theory to one core variable. The other variables are not lost, but focus on the analysis of one core variable merely demotes possible other core variables to a role subserviant to the variable under focus. To selectively code for a core variable means that the analyst delimits his coding to only those variables that relate to the core variable in sufficiently significant ways to be used in parsimonious theory. The core variable becomes a guide to further data collection and theoretical sampling. To help analysts in Selective coding, Glaser introduces the Concept-Indicator -Model. (Glaser 1978, 61 - 70.)

To move from substantive theory to formal theory the analyst have to do theoretical coding. Theoretical codes conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into a theory. Glaser names 18 coding families that helps analysts to do theoretical coding (The Six C's; Causes, Contexts, Contingencies, Consequences, Covariance and Conditions; The Process, The Degree, The Dimension, The Type, The Strategy, The Interactive, Identity-Self Family, Cutting Point, Means-goal, Cultural, Consensus, The Mainline, Theoretical, Ordering or Elaboration, The unit The Reading, Models). These coding families overlap considerably. (Glaser 1978, 73 - 81.) The purpose of using these coding families is to help the analysts to see connections between his own concepts and concepts in theoretical literature.

Strauss way of coding

Strauss way of coding is composed of three major type of coding. These are: open coding, axial coding and selective coding. Strauss also introduced the conditional matrix as a framework for the whole analyzing process. (Strauss & Corbin 1990, 57 - 193.)

Open coding is the part of analysis that pertains specificially to the naming and categorizing of phenomena through close examination of data. During open coding the data are broken down into discrete parts, closely examined, compared for similarities and differences and questions are asked about phenomena as reflected in the data. Open coding begins with conceptualizing the data. After that the analysts groups these concepts with same kind of concepts. The process of grouping concepts is called categorizing. When the analysts begin to develop a category he do so first in terms of its properties, which can then be dimensionalized. (Strauss & Corbin 1990, 62 - 69.) Shortly said open coding fractures the data and allows one to identify some categories, their properties, and dimensional locations.

Axial coding puts the data back together in new ways by making connections between category and its subcategories. In axial coding the analysts focus is on specifying a category in the terms of the conditions that give arise to it: the context in which it embedded, the action/ interactional strategies by which it is handled, and the consequences of those strategies. These specifying features of a category give it precision, that is why they are called subcategories. (Strauss & Corbin 1990, 97.)

In book of *Qualitative Analysis for Social Scientists* Strauss introduces Coding paradigm that is meant to guide the whole coding process. It includes categories components like conditions, interaction among actors, strategies and tactics, and, consequences. In the book that Strauss wrote with Corbin the paradigm model was enlarged. In axial coding subcategories are related to their categories through the paradigm model. This model consists from causal conditions, phenomenon, context, intervening conditions, action/interaction strategies, and, consequences. (Strauss & Corbin 1990, 99 - 107.) It is very interesting that Strauss and Corbin introduces paradigm model with a different name and most interestingly placed in axial coding. But to me it is in fact the same model as Coding paradigm, that is said to guide the whole coding process.

Selective coding is the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development. (Strauss & Corbin 1990, 116.)

Integration is not much different than axial coding. It is just done at higher more abstract level of analysis. The purpose of selective coding is getting the story straight, developing a clear story line and translating these into an analytic story. Strauss names several steps through which this goal will be reached. The first steps involves explicating the story line. The second consists of relating subsidiary categories around the core category by means of the paradigm. The third involves relating categories at the dimensional level. The forth entails validating those relationships against data. The fifth consists of filling in categories that may need further refinement and/or development. (Strauss & Corbin 1990, 117 - 148.)

Glaser and Strauss differs in their ways to definite the substantive and formal theory. Glaser and Strauss stated in the first book that if the analyst starts with raw data he will end up initially with substantive theory: a theory for the substantive area on which he has done research. If he starts with findings drawn from many studies pertaining to an abstract sociological category, he will end up with formal theory pertaining to a conceptual area. This move to formal theory requires additional analysis of one's substantive theory, and the analyst should include material from other studies with the same formal theoretical import, however diverse their substantive content. (Glaser & Strauss 1967, 114.) Later on Glaser seems to agree with this. But Strauss, in his turn, argues that it is not the level of conditions that makes the difference between substantive and formal theories but the variety of situations studied (Strauss & Corbin 1990, 175). This is probably why Strauss lacks the process that Glaser refers as theoretical coding. (Glaser 1978, 175.)

Conclusion

As a conclusion I have drawn a figure about CCM and Glasers and Strauss' ways of coding (Figure 1.).

We can see several differences between these processes. Firstly it is quite clear that there are different concepts used to refer to the same phenomena like open, axial and selective coding refers to same as substantive coding. But there are also differences inside these phenomena like the emergence time of core category differs in Glasers and Strauss' coding procedures.

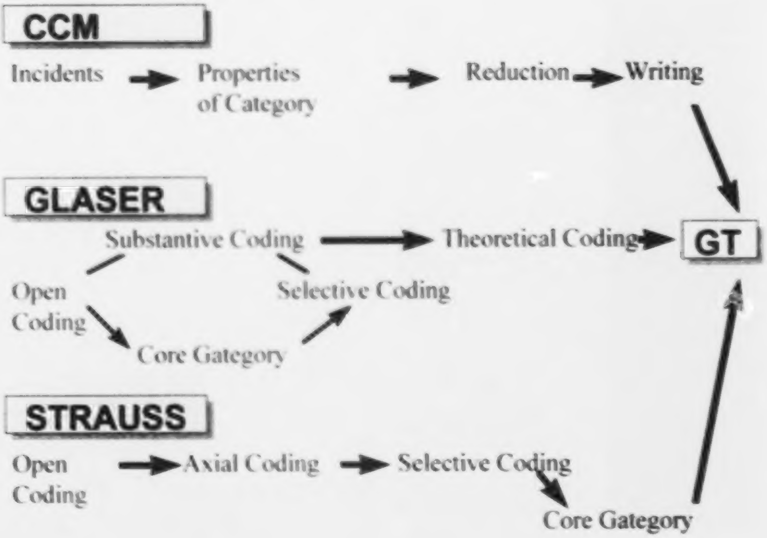
CCM
Incidents
Properties of Category
Reduction
Writing
GLASER
Substantive Coding
Theoretical Coding
GT
Open Coding
Selective Coding
Core Gategory
STRAUSS
Open Coding
Axial Coding
Selective Coding
Core Gategory

Figure 1.

CCM and two different ways of coding.

We can see several differences between these processes. Firstly it is quite clear that there are different concepts used to refer to the same phenomena like open, axial and selective coding refers to same as substantive coding. But there are also differences inside these phenomena like the emergence time of core category differs in Glasers and Strauss' coding procedures. Secondly these two coding procedures differs in that point that Strauss' coding process does not include theoretical coding in same matter than Glasers coding style does. Thirdly we can see difference in the level of how ready-made the coding method is. Strauss have developed method quite ready before analysts starts and Glaser seems to believe more that method develops as the theory begins to emerge. The fourth point is linked

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with the previous one because Strauss argued that GT cannot be made without the paradigm model, that is formed in book *Qualitative Analysis for Social Scientists*, on the contrary Glaser states that there are no beforehand perspectives allowed. Fifth difference is linked to the general nature of the process: Glaser seems to concentrate in educating researchers with a right and suitable attitude and Strauss seems to concentrate solving the analysts problems which emerges in the research process. The purpose of this paper was not to divide GT into two different camps, of course this would need more research. The point of this paper was just to rise a question about that maybe we actually do have two different ways of working with GT. In my opinion it is important to analyst to explicate which one of these different coding ways he uses.

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To Speak of the Unspoken: Tacit Knowledge and Participation in Its Interpretation

Abstract

Tacit and propositional knowledge are discussed as complementary forms of knowing. Researcher's participation is used as a sensitizing method in conjunction with interpreting verbal data. Participation is found useful for studying tacit action which is insufficiently conveyed in propositional form.

The method is applied to a subunit of the case study entitled Creating a Unique Dress. The design and production process is investigated from the fashion designer's and other makers' viewpoints. Concepts concerning process are generated from the data.

The tacit knowledge is mainly discussed in the tradition of Michael Polanyi's philosophy.

Keywords: Tacit knowledge, propositional knowledge, craft process, participation.

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To Speak of the Unspoken:Tacit Knowledge and Participation in Its Interpretation

Introduction

Only in relatively recent times have we become increasingly aware of the concept of tacit knowledge although as a phenomenon it is well-known to all craftspeople. Especially when we do not measure our research object, we have to discern what the research object actually is: How is it constituted ontologically and epistemologically? What, then, is the craft process? How close to it can we come and what is the vehicle that brings us closer to it? If we know that our object is to a great extent a tacit process, does it need to remain as such?

The example that I discuss here is part of a larger study entitled *Creating a Unique Dress*. It is a case study which bridges the past and the present in that it covers the last fifty years of recent history although it is not beyond the reach of methods applicable to contemporary research. More specifically, I am referring to the section in which the research object is the design and production process of custom-made dresses. They are unique both in their fitting and design. The result of the study is the conceptualization and understanding of the design and production process.

The extensive yet fragmentary information drawn from twenty informants led me to consider complementary methods for bridging the gaps in the data and enhancing the interpretation of the already acquired data. Both the research object and the method of its investigation involved a tacit dimension.

Tacit Knowledge

Actors in various fields of professional and everyday life use knowledge which remains unspoken. Writers mention two approaches to this phenomenon: one is unsagbar, the unsayable, of the philosopher Ludwig Wittgenstein and the other is tacit knowledge of the philosopher Michael Polanyi. What I will discuss mainly follows Polanyi's tradition. I approach this discussion from the craft's point of view, while still drawing upon other fields for the reason that tacit knowledge is not only craft's private property.

Polanyi considers human knowledge by starting with the fact that we know more than we can say. We can do things without being able to articulate how we have done them. Physiognomies, the study of facial features and expressions, is one of Polanyi's examples that can neither be fully described in words nor by pictures. (Polanyi 1966, 4-5) This is an interesting example because here Polanyi also mentions pictures, while tacit knowing is otherwise discussed by him and other writers in juxtaposition with language.

Tacit, in Polanyi's sense, does not mean something that cannot be expressed in words at all but rather what is difficult or unnecessary to express or, as Janik puts it, what we just never get around to putting into words. In contrast, according to Wittgenstein there is always some knowledge that cannot be expressed in words as its very nature is incapable of precise articulation. (Janik 1988, 54; Rolf 1995, 39)

Nonetheless, that an act is not described does not mean that it cannot be described. People pay little attention to the practice of blacksmiths until their practice is in danger of going out of existence. Crisis is usually the motive to begin articulating things which people have never found interesting and important enough to try to systematize. It is also worthwhile noting the sort of things not spoken of, for example, for political or economic reasons. Status and power may depend upon keeping tricks of the trade from the uninitiated. (Janik 1988, 54-55) This closed-shop policy is protectionism; it is not tacit knowledge. (Dormer 1994, 21)

Dormer emphasizes the fact that craft knowledge must be demonstrated since it will not easily, if at all, be adequately conveyed through what can be said or written about it. Practical work is the core of craft knowledge and as such does not reside in language. It resides in these physical processes involving the physical handling of the medium. Thus, demonstration of craft knowledge or a product of it must be the way of submitting this knowledge to public scrutiny. (Dormer 1994, 7; 14; 24) What we know in general is tied to how we know it, which in turn is tied to prior context, and so on. Knowledge works like a hermeneutic circle in diverse fields of human life. 'Bureaucratic tacit knowledge', for example, is implicit argumentation behind decision making. (Altheide and Johnson

1992, 52-54) Practical, moral and aesthetic knowledge have components from readiness, attitudes and emotions which work tacitly (Rolf 1995, 28). Moreover, we can have a tacit fore-knowledge of yet undiscovered things (ibid 23).

Linking Propositional and Tacit Knowledge

Why legal texts often sound ridiculous, why people avoid reading manuals, or why knitting instructions are so often an incomprehensible and tedious mess is because these types of texts speak of issues that people intuitively prefer to understand without reading or writing. Accordingly, what should or should not be done - legally or operationally - always includes gaps which must in any case be negotiated tacitly.

Connoisseurship is knowledge of the senses; an expertise used for tasting food and drinks and for diagnosing problems, such as medical and technical for example. Although connoisseurs cannot give verbal argumentation for all of their judgement, it is not to be confused with a whim or an opinion. (Dormer 1994, 22)

Dormer says that his text is not a defense of craft knowledge for its own sake but rather an alternative to propositional language and theory. (Dormer 1994, 39) However, I think that this conception of alternative is only defensible at the moment of 'crisis' highlighting its existence. We should readily conceive tacit knowledge as complementary and interdependent among other forms of knowledge, and accordingly we can make the most of it. Dormer (1994, 10) does not overlook the notion that language gives us the power of conceptual thought and ability to reflect theoretically on practical matters both of which can be immensely useful. On the other hand, Polanyi does not use the concept of tacit knowledge to put a wedge between the knowledge that functions tacitly and that which is conveyed in speech (Rolf 1995, 35). If we speak of knowing, we speak of both practical and theoretical knowledge (Polanyi 1966, 7).

For Polanyi, the possibility of the language to inspect tacit knowledge is essential in passing down tradition. Human knowledge often changes through the actuality that tacit knowledge and verbal reflection work together. What has once been tacit can thereafter be expressed in words, hence reflected and developed into another form and then integrated into one's personal knowledge. Verbal and nonverbal grow together. That is how culture takes hold of us and becomes personal knowledge. (Rolf 1995, 35) The interdependence of different kinds of knowledge in professional life has also been emphasized by Gullers (1988, 37) and Göranzon (1988, 16); and it is as well a central idea within craft research. However, Polanyi reminds us that the process of formalizing all knowledge to the exclusion of any tacit knowing is self-defeating. In order to formalize the relations that constitute a comprehensive entity, we must first identify them informally through tacit knowing. A comprehensive theory which would eliminate all tacit knowing is self-contradictory and logically unsound. (Polanyi 1966, 20-21)

Tacit Knowledge and Related Concepts

There are confusing inconsistencies among the concepts related to tacit knowing. Researchers of differing experiences are deriving equally differing concepts. (Cf. Göranzon 1988, 16) Different concepts are used for tacit knowledge or for a special form of it, or for combination of different kinds of knowledge.

According to Polanyi and Prosch our personal knowledge is guided by a purpose in the action, and this, in turn guided by our attention. This knowledge is in part from text books (or the like), but these texts are of no use without the accompanying training of the sense of touch, the right sense or feel. (Polanyi and Prosch 1975, 43) Personal knowledge is a combination of tradition and subjectivity within a person. It is about how an individual, tradition and society relate to each other. Personal conscience serves as an example of the subjective element. Personal knowledge refers not only to one's experiences, but to the reality which is common to all. It works tacitly in certain situations. (Rolf 1995, 96)

Dormer uses the terms craft knowledge and tacit knowledge in a way that equates them, although he remarks that the term tacit knowledge is preferred among academics. This is quite evident, since tacit knowledge is also relevant within other fields, and in both meanings of the word: 1. implied without direct expression, understood; and 2. silent. (Dormer 1994, 13) In Dormer's conception craft knowledge is something that not only enables you to achieve your goal, but also enables you to imagine what your goal might look like (ibid 19). This comes close to what Pörn

(1992, 45) calls the knowledge of means and methods i.e. knowledge that presupposes a certain goal.

Practical knowledge is a combination of different kinds of elements, comprised of both propositional and tacit knowledge. It involves personal judgement and thus articulated knowledge is not sufficient. (Pörn 1992, 45-49) To Gullers, above all else practical knowledge implies practical actions associated with traditional craft skills. It is manual skill, in contrast to physical labour, and abstract thinking. (Gullers 1988, 35) Likewise, according to Heron (1988, 42), practical knowledge is knowing how to do something. Polanyi's example of practical knowledge is keeping balance on a bicycle. This skill is totally ineffectual unless it is known tacitly or in other words, simply dwelt in. It involves the irreducibility of tacit integration. (Polanyi and Prosch 1975, 41) This is much like Rolf's definition of personal knowledge, and actually Polanyi's example of practical knowledge is under the title of personal knowledge.

Skill is a kind of readiness that one can learn through one's own experience, through personal contact with reality. It is practical knowledge consistent with rules, where the following of the rules is not subjected to any outside judgement. Thus it does not require a social community to decide whether the actor gained the goal or not. (Rolf 1995, 116) There is unanimity concerning the idea that skill is partly tacit knowledge. (Janik 1988; Gullers 1988; Pörn 1992; Rolf 1995) Skill is not only, or even primarily, an instrumental act. It also involves propositional knowledge and the knowledge of familiarity. Together these forms of knowledge make up a single kind of professional skill. (Gullers 1988, 37-38)

Know-how is practical knowledge consistent with rules, where the following of the rules can be exposed to the judgement of others. (Rolf 1995, 118) It differs from skill in that it can be verbally expressed. According to Niiniluoto (1988, 52), it can be taken for a special kind of propositional knowledge. Hence know-how can be captured and conserved (Rolf 1995, 122) while skill cannot.

Knowledge that I will discuss later on from the viewpoint of my research could be equated with any of these forms of knowing depending on the emphasis. My very aim is to capture and conserve at least part of it. Thus, it is know-how rather than vanishing skill. It is personal knowledge, because it is a combination of tradition and subjectivity. It is practical knowledge, because it is comprised of both propositional and tacit knowledge. And definitely it is craft knowledge; craft is where it resides.

Methodological Approach to Tacit Knowledge

The nature, acquisition and practice of tacit knowledge has implications for the ways in which it can be investigated. Its relationship with propositional knowledge reveals that it is not totally beyond explicit reach, but the most important thing one can know about people is what they do not speak about - what they take for granted (Altheide and Johnson 1992, 54), and this is a methodological challenge.

Altheide and Johnson think that the equation of meaning and text is part of the totalizing battle plan to destroy the ineffable linkage between raw experiences and poetic interpretations. Why intellectuals would conflate meaning and text is mysterious. It may have something to do with the experiences of intellectuals facing a status and identity crisis in a situation of challenged legitimacy. (ibid. 51) Since I generally hold with these foregoing thoughts, it now seems strange that participation was not in my original set of methods to investigate a craft process. One reason may be that I was blinded by the fact that I initially emphasized the historical point of view. However, unique dresses are still occasionally designed by the studied designer, although not in an occupational setting, and hence it is possible to include the notion of indwelling, i.e. participation involving hands-on production, in my methods.

Sometimes a broader perspective is needed in order to see what is close at hand. I was inspired by Chandra Mukerji who has problematized the non-linguistic features of material culture and discussed the ways of learning about it. One of the ways that scientists learn about the world is by participating in it, by acting in and with nature through experiments. (Mukerji 1994, 154 and 160, criticizing and drawing together from several writers.) The different channels of acquiring information have also been problematized by Polanyi (1966, 17), Cooley (1988, 130) Janik (1988, 60-62), Altheide and Johnson (1992, 53), and Anttila (1996).

If we understand that tacit and propositional knowledge are interrelated and that tacit knowledge can be verbalized, we still have to decide whom we expect to verbalize it. Is it the researched person whose action fares well without words, or is it the researcher who wants to know of it and report it in text?

According to Altheide and Johnson (1992, 53) learning about substantive tacit knowledge must involve actual, real-life participation with persons-as-experiencing-agents-in-concrete-situations. This is what Cooley (1988, 130) refers to as deep situational involvement, and Dormer (1994, 42) as 'going native'. Central to quality ethnographies is the uncovering of tacit and nondiscursive knowing, and the corresponding recounting of it in intelligible ways. One possibility is to give a new name to certain things, and thus make them discursive. (Altheide and Johnson 1992, 53-56) Here practical knowledge serves as a spur to conceptual reflection (Dormer 1994, 57). The articulation of this kind of knowledge is best described as a sort of hermeneutic activity. It is a form of interpretation which depends upon the researcher's ability to grasp the practice of the worker as a participant in those practices, and not merely as an observer. (Janik 1988, 60) It is not by looking at things but by dwelling in them that we understand their joint meaning (Polanyi 1966, 18). The aim is that the observer's participation in the act of knowing leads to a point where the observed function can be regarded as impersonal, i.e. generally applicable rather than personally idiosyncratic (Polanyi and Prosch 1975, 43). Thus it becomes scientifically interesting.

The use of participant observation dates from the pioneering ethnographies of Malinowsky in the 1920s. However, this kind of participation evades active involvement. Rather, it refers to long field work and acquaintance with the background of events as they occur. (Bastin 1988; see also Altheide and Johnson 1992 and 1994)

Reason (1994b) presents three approaches to participative inquiry: co-operative inquiry, participatory action research, and action inquiry. They arise from different ideologies, but what they have in common is involvement with people and communities; the problem holders. Knowledge arises in and for action, and involves an interplay of different forms of knowledge. These methodological approaches also include the notion of future development which is inherent within them. (See also Kemmis and McTaggart 1988) These approaches have much in common with my need for a complementary method in conjunction with interviews. In my research the studied people are not the problem holders and neither do they need to improve their practices. They are taken as they are. The other difference is that neither the researcher's role-taking nor her making artefacts are mentioned in already referred forms of participation. But I agree with Reason (1994a, 201) in that if a method becomes an orthodoxy it will degenerate and again stifle creativity, and thus people should invent their own methodological forms most suitable to the undertaken project.

Participation

I have interviewed 22 people on the design and production of unique dresses. The number is seemingly large, but the problem remains that few people are aware of the whole process, and some people reminisce past events and parts of the process they have not gotten used to speaking about. They have just been done. Hence, the situation required a complementary method, which I decided would be taking the role of client, cutter and dressmaker.

'As a client' I have ordered two complete outfits and a jacket. The first outfit, a skirt and tunic, was cut by the professional cutter; the long time co-worker of the designer. This situation allowed me the possibility to observe her work which included interpretation of the designer's ideas: sketched, spoken and tacit, and the actual cutting. In the case of the other outfit, a coat dress (robe manteau) and skirt, as in that of the jacket, I took the role of the cutter myself, and I sewed all of these garments.

As I was 'the client' the garments were fitted on me. Thus it was possible not only to observe by seeing and hearing but to feel the probing hands forming the individual related shape - one of the constitutive ideas of the unique dress. While the fitting session is an arch example of tacit work, it is not completely silent. What the designer speaks of is directly connected with the on-going work, or with an issue related to it, which support her ideas of what she is doing. Both cases indicate the relationship between propositional and tacit knowing, and they enhance the understanding of the latter.

As 'a dressmaker' I had to be able to interpret the swatches of material, ribbons and pins, which presented the design details. Something of them was described in words, though that was more like giving an idea what the detail should look like in associative terms. The actual construction was to be inferred from the assemblage of material.

Observation and personal experience are used to sensitize the interpretation of parsimonious verbal data. I find it important to highlight this because recently there has been criticism of post-positivist research and its bending the principles of scientific clarity, when the researchers confuse the research object and their own experience. Although I would not like to celebrate closed categories, I would like to point out that the research object is the process as it retains its recurrent features over time. The researcher's involvement is part of methodology for enhancing the conceptualizing capacity, not an end in itself.

The data was organized according to the strategical model derived from the iterative craft process model by Anttila (1992, 111; 1996, 150). The craft process strategy is a conceptual sieve for sorting out data. This approach takes advantage of the developed conceptual units but what does not fit through the sieve is re-examined and re-problematized whereby the model is expanded and complementary concepts are developed without being forced into the model.

Examples of the Concepts Generated by the Interplay of Different Data

Figure 1 illustrates excerpts from the conceptualization of the design and production process of a unique dress on the basis of understanding it in my research. I will only address certain concepts, for the development of which I found participation useful. These are entrustment, permissive operationalization and renunciation.

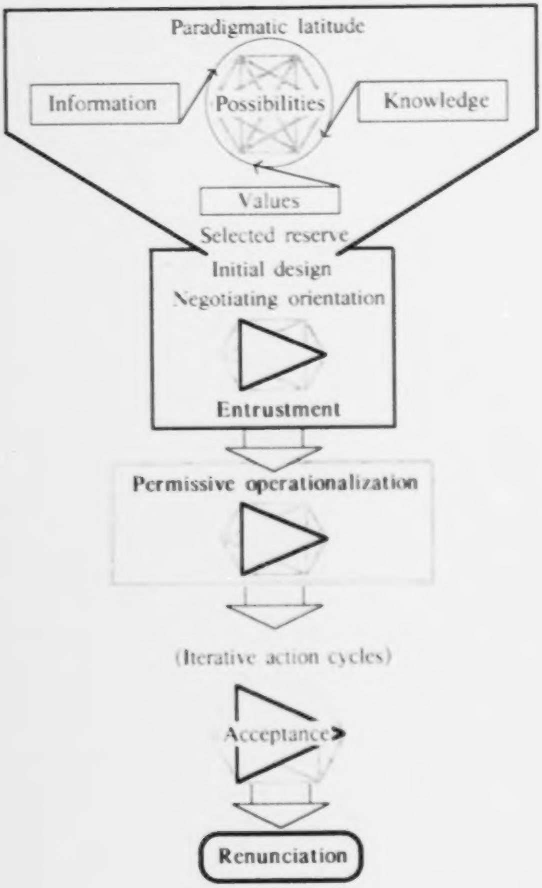
Paradigmatic latitude
Information
Possibilities
Knowledge
Values
Selected reserve
Initial design
Negotiating orientation
Entrustment
Permissive operationalization
(Iterative action cycles)
Acceptance
Renunciation

Figure 1.

Entrustment, permissive operationalization and reunication phases in the design and production of unique dresses. (Excerpts from the process)

Designing a unique dress on the commission of a client does not allow for viewing or trying on an existing dress. Instead, the initial design of the dress is created by the negotiating orientation. It consists of a discussion, material selection and sketching, and ensures the convergence of views. The sketch is used as the means of communication in developing the orienting image of the dress and not as a preview of the completed dress. The result of this mutual understanding is entrustment. That is, the client is convinced that the designer has a strong view of the desired product and is taking the responsibility for it.

It is quite evident that a client must trust the designer and her makers to be able to order. Just how the feeling of certainty is elicited by the designer in each case, rather than a general blind trust, and how this phase is related to the complete process became clarified through my participation as a client. This process is an example of a concept which was developed mainly on the basis of participation and which had only vaguely come up in the prior discussions.

The sketch can be discussed verbally by the designer and the cutter for precision, but the first cutter's expression of 'quarrying pieces from the fabric' epitomize the tacit understanding of the permissive operationalization expected from her. That is, the cutter is not expected to fashion a dress to a presumed final form like a sample maker using the charts for ease allowances and the like. The diffuse practice demands a great deal of personal reasoning, tolerance of risk, and flexibility from the cutter. The appreciation of these qualities in a good cutter is expressed by the designer as: 'Talusen would never ask me where the buttons will be.'

This suggests that the cutter could infer the possibilities, and where ever the buttons were, the design would not meet a dead end.

Our prior discussions had implied these issues, but it was the cutter's expressions together with the observation of her work that helped to structure this knowledge. It is an example of partly verbalized action, which in its natural setting is usually silent. The understanding of permissive operationalization was validated by my own experience in the later cuttings.

Renunciation is the designer's lonely, invisible phase of the design process. It does not only mean that she gives up the actual product; she also gives up that unique design idea. This is the prerequisite of generating new ideas and continuing as a designer of unique dresses. There may be analogical elements in different creations and similarities that make the designer's style recognizable, but there will not be a repetition of any particular combination. A client may describe what she desires starting from the designer's prior creations. The designer listens to this to get an idea what the order is about but what she will suggest is definitely unique.

The awareness of this phenomenon was inspired by an interview where an informant took up the artist's ability to give up the product. In the role of a client I could realize how the designer reacted to the references to her earlier works. Renunciation, which cover the artifact and the idea connected to it, is an inference arrived at by considering both the remark in the interview and the experience in participation.

It may well be that these concepts seem quite evident - taken for granted. If this be the case, then it is merely consistent with the conception of tacit knowledge discussed above. But to what extent have they been discursive to the people who think they are evident? The examples indicate that tacit doing is an inspiration for discursive communication. And vice versa, discourse evokes something out of the tacit. In participation, discursive and nondiscursive are not divorced, they are interwoven.

Understanding and Not Understanding Tacit Knowledge

This kind of research on tacit actions and knowing can serve (at least) two aims: 1. expanding the discursive or visual element of knowing and thus making it shareable; and 2. enhancing awareness of the tacit dimension, while it remains tacit.

We - craftspeople, teachers and researchers - are wedded to tacit knowledge. We are aware of the phenomenon and increasingly of the concept, too. Paradoxically, what we tacitly know we have to be able to speak of in order to communicate with people who ignore tacit knowledge. Ironically, tacit knowledge is not divorced from decision making, but what counts as a decision in our academic community is propositional text. Polanyi (1966, 25) points out that the failure of the positivist movement is largely due to attempts to exercise the kind of lucidity which destroys the subject matter. Polanyi wrote this in 1966, and by now we are aware of it. Still I have a cynical apprehension that we cannot only put the blame on the positivists for neglecting tacit knowing. We should also have a look at ourselves under the pressure of legitimating our discipline, which is by no means finished. It is our task to introduce tacit knowledge as an epistemological concept to those who make policy decisions. Otherwise we are taken for prisoners of the teachers' college culture where educators have been located in the past, or conservativism in general; and we have to re-justify our knowing in action year after year. The most devastating consequences that we can get are those due to our own neglect of the epistemology of our subject matter. Acknowledging this is necessary for defending and developing it with all its dimensions, the tacit included.

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Generally referred to as informants about the studied process:

Dressmakers, mannequins and other co-workers of the designer 1942 - 1992, interviewed 1993 - 1996.

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Some Observations on the Anttila Paradigm of Designing and Making-up

Abstract

The Anttila paradigm for designing and making-up processes is explained and presented in her publication: The Theoretic Foundations of Crafts and Design (Anttila 1993). A closer examination of the paradigm as a general model provokes questioning of its expressiveness in actual realistic situations. The paradigm created considers the designing and making-up processes as simultaneously overlapping cognitively controlled events of an individual. Speculation sheds light on important variables which seem to intervene with the cognitive processes and they will control the outcome and nature of the paradigm. The paradigm disregards the effects of development of human skill on the novice - expert scale, laws of nature in material behaviour and human inclination to choise of material to be processed.

Keywords: Artifacts, designing, making-up processes, skill.

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Some Observations on the Anttila Paradigm of Designing and Making-up

Introduction

The Anttila Paradigm of designing and making-up processes of artifacts (Figure 1.) is presented and explained in her publication of 1993, called: *The Theoretical Foundations of Crafts and Design.*

The paradigm explains the processes of an individual as an integrated model. In this model the designing and making-up processes overlap. The theoretical background is build on Korobkin's concept (1976) which Zeisel developed into a spiral metaphor (1986). Anttila's paradigm approaches these processes as a divergent or open problem solving model in a soft systems web (Checkland 1986) with the product designing dimensions created by Papanek (1970). The creation of an artifact is explained from the appearance of the first orientative and operative (Hacker 1982) mental images of the initial idea until the transformation of the product into physical matter. (Anttila 1993) Only a minimum of research (Suojanen 1991) has been done to investigate this paradigm and all of that has concentrated on textiles as the making-up material in learning circumstances.

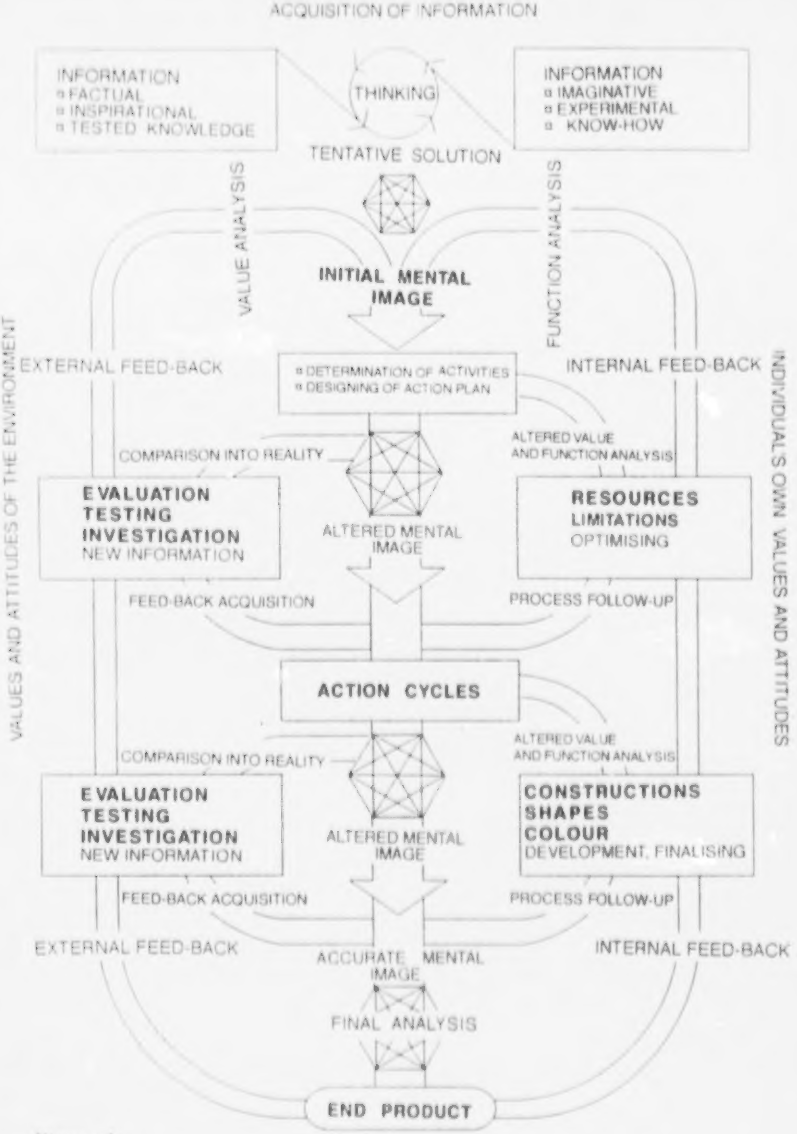
ACQUISITION OF INFORMATION
INFORMATION
▫ FACTUAL
▫ INSPIRATIONAL
▫ TESTED KNOWLEDGE
THINKING
INFORMATION
▫ IMAGINATIVE
▫ EXPERIMENTAL
▫ KNOW-HOW
TENTATIVE SOLUTION
VALUE ANALYSIS
FUNCTION ANALYSIS
INITIAL MENTAL IMAGE
VALUES AND ATTITUDES OF THE ENVIRONMENT
INDIVIDUAL'S OWN VALUES AND ATTITUDES
EXTERNAL FEED-BACK
▫ DETERMINATION OF ACTIVITIES
▫ DESIGNING OF ACTION PLAN
INTERNAL FEED-BACK
COMPARISON INTO REALITY
ALTERED VALUE AND FUNCTION ANALYSIS
EVALUATION
TESTING
INVESTIGATION
NEW INFORMATION
ALTERED MENTAL IMAGE
RESOURCES
LIMITATIONS
OPTIMISING
FEED-BACK ACQUISITION
PROCESS FOLLOW-UP
ACTION CYCLES
COMPARISON INTO REALITY
ALTERED VALUE AND FUNCTION ANALYSIS
EVALUATION
TESTING
INVESTIGATION
NEW INFORMATION
ALTERED MENTAL IMAGE
CONSTRUCTIONS
SHAPES
COLOUR
DEVELOPMENT, FINALISING
FEED-BACK ACQUISITION
PROCESS FOLLOW-UP
EXTERNAL FEED-BACK
ACCURATE MENTAL IMAGE
INTERNAL FEED-BACK
FINAL ANALYSIS
END PRODUCT

Figure 1.

Anttila (1993) paradigm of designing and making-up in crafts.

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Attention in this paradigm is first attracted by the fact, that the designing and making-up processes overlap from the initiation to the termination of the processes. As such, it must have been assumed, that when the paradigm is constructed as an open problem solving model with a divergent approach, that there exists all potential for unlimited creativity.- In other terms, each time a product is created, it is a new, earlier unknown creation. But in this sense the paradigm must be considered static or even rigid, because it actually leaves no room for the dynamic increase of skill apparent with the consecutive creation processes. This statement has to be refined.

Development of Skill in the Designing and Making-up Process

Each repetition of a designing and making-up process generates new levels of knowledge into the mind of a craftsman as orientative and operative images and facts which have to be confronted in the physical world (Hacker 1982, 300-329). The physical world and the physical matter as material is controlled by the laws of nature and these laws are irreversible, however much we would want to manipulate them. When the human being and the world are confronted in interaction, the human being certainly copes, not the nature. This is why new information modifies the mental images of the craftsman (Graae 1993, 7). It must also be assumed that each repetition provokes learning which adds knowledge and skill to the processes, which in a new set-ups can be transferred and exploited later on. Thus parts of the designing and making-up processes become more convergent and only a part of the problems stay as open problems and unknown reality.

If the above mentioned were not true, it would mean, that the craftsman would be uncapable of transferring further on his previous experiences and new knowledge. A person who does not learn from his previous experience is not generally considered very intelligent. The paradigm allows this interpretation, it neglects the alternations that will take place in the consecutive processes along with the development of skill from a novice into an expert or professional.

If we evaluate the generation of skill it has been shown that the first basic skills are learned serially in bits and pieces, one thing is learned after an other until so much basic knowledge is generated that there is a possibility to start integration, develop higher levels and innovative applications (Hacker 1982, 314 -315; Seitamaa-Hakkarainen 1994, 91). The designing and making-up processes are certainly integrated at early stages of skill acquisition - and it must be noted, this is due to lack of knowledge. But the more knowledge and skill is acquired, the more the designing and making-up processes can be assumed to withdraw from each other. And as my hypothesis, I state, that the amount of operative images in the designing process increase. Theoretically an expert or professional can produce artifacts in separate phases, with a more or less separate designing and a separate making-up process. Anttila paradigm does not allow this movement or separation of the different processes along with increase of skill.

Artistic Artefacts Created in Flexible Integrated Processes

Next, I would like to deal with the cases where the Anttila Paradigm seems to follow very sound trails. In the domain of art where the aesthetic dimension is of paramount importance, there can appear flexible materials that allow the designing process to follow until the end of the making-up process. I shall give here three examples:

1) If you are a painter and your paint allow painting on top of earlier production, as painting with oil paints, there exists the possibility to alter your work through out the whole process. This was well illustrated in the videotape made from the painting process of Jan-Erik Dahl, a known Swedish painter.

2) My second example concerns crafts textiles done by different embroidery techniques. There can exist a thorough designing stage applying different designing techniques: drawing, photography techniques, computerized designing, what ever. But it is also possible to approach a designing assignment directly with material. But when the embroidery task is being processed the end-result can be altered all through the making-up process. This takes place due to consecutive aesthetical assessments by which it is decided or recognise when an acceptable end result has emerged. The last aesthetical assessment ends the making-up process.

3) The third example uses clay or an equivalent material in the making-up process. During the whole moulding process the moulder evaluates the process in small bits of information arising from the actual events and outcomes inside the moulding process. He has the whole time a possibility to

apply corrective action as long as the pot is in his hands.

These three designing and making-up processes are well in accordance with the Anttila paradigm. There exits, however, similarities, let us draw conclusions. Firstly there seemed to be none or only a coincidental image of the out-come of the product. Secondly the material which was used for processing would allow continuous alterations without damaging the end product. Thirdly there was carried out a short-sighted production strategy with a more or less impulsive approach to work.

At this point very interesting questions arise: Must otherwise created handmade artifacts or products be excluded from what we have until now included into Textiles, Clothing and Crafts Design? Where do they then belong to? Are they arts or crafts? How do the processes of these products differ from the Anttila Paradigm? This time these question will not be answered, because I wish to proceed with the paradigm.

Effect of Material Properties on Anttila Paradigm

If we approach the paradigm of the designing and making-up process theoretically, it can be assumed that, there has to exists situations where the two different processes are completely separate. This can be clarified by a simple example. It is possible to design a product without any material. This is done when a product is designed with a computer and the product is transferred into a virtual reality and observed and experienced there. In this case there can be distinguished only a designing process, no making-up process nor known material.

The designing process in a next case can be profound leaving only a minor part to the making-up process. To illustrate this I shall call certain materials such as wood, metal, plastic and equivalents conventionally 'hard' materials. The rigid property of such material force a making-up strategy where the essential proportion of the making-up process has to be connected into the designing process and the two processes cannot be integrated any more. If the designing process is understood as operative and operational mental images which can be converted to existence with a computer, paper or pen, there can be observed a strong emphases on the development of operational images. This part of the designing process is very often called technical design. It does not have to include interaction with material, even though it can be present. All dimensions of the components of the construction has to be known and specified accurately already in this initial designing stage well before the final making -up process. - If this is not done, the risk of creating a reject is present and the parts to be assembled will not fit properly together. They have to be reprocessed.

Thus the type of material demands a thorough designing process which mainly covers all the events of the making-up process separating the two processes from one another as two consecutive processes with only a minimum of interaction.

Influence of Gender in the Designing and Making-up Processes

Anttila Paradigm disregards the effects of skill development and the effect of the properties of material to be processed. But there still exists an interesting feature or variable which is bound to the properties of material. This variable is gender as female and male culture (Berge 1993, 35-45). Both genders are believed to have equal ability to solve problems. We do not know yet what the difference in brain and hormone structure means in terms of material expression.

What ever the reason, it has been seen that men and women create different cultures in which they live in - I hope - with the best of synergy. For some reason this background has led to the reality that females choose more often than men soft materials as textiles for their expression of their existence in these cultures, where as construction of the environment in hard materials has been interpreted as a male expression. It seems that this image for textiles is interfered only when male culture features are present such as technology or high status.

The fact that both genders are able to learn and manage any technique independent of material does not mean that we have the right to interfere the innate cultures of the human beings. We have to realise that despite learning and even enjoyment of the outcomes of the designing and making-up processes as artifacts in the opposite elements, it will only rarely turn out to be the life style of the other gender in the opposite culture (Berge 1993, 44). Before this statement is shown with more extensive study, I would like to remind that in such research undertakings have to be conducted from a valid population, not only craftspeople. For example when textile work as a life style of the male is studied, the sample has to consist of rich men, poor men, bagger men, thieves, doctors, lowers, merchants, chiefs --

In conclusion it has to be stated that the Anttila paradigm is an excellent attempt to explain the complexity of the designing and making-up processes in Crafts Science. But, as is now has been discussed, there exists several important variables as human skill, human inclinations, the laws of nature and materials behaviour which will alter this basic paradigm. This is why I am not ready to believe that no one model can work as an general paradigm to explain the creation of artifacts. I wish to leave these aspects open for scientific research to gain more knowledge and to complete the well started work of Pirkko Anttila.

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Ansats til en sløjdpædagogik

Abstract

Den formal-dannende pædagogiske begrundelse for indførelsen af sløjd i danske skoler omkring århundredeskiftet synes at leve i bedste velgående i nutidens sløjdpraksis. En praksis der i overvejende grad er forankret i en praktiseret praktik, og en af denne afledt praktisk viden, der sammenholdt med fraværet af en egentlig fagdidaktik, afstedkommer et kulturelt og pædagogisk efterslæb.

Den tiltagende kontingens sprænger det traditionelle pensum, og aktualiserer en kritisk eksplicitering af hvad der er på spil, når der bedrives sløjd. Artiklen kommer med et bud på ad hvilke veje dette kunne ske.

Sökord: Social og kulturel reproduktion, fornuft, viden, habitus.

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> "*Grunden Sløjdskolen bygger på med et ord er den: At tilsigte af faa legemligt Arbeide lyst i Kuld og Kjøn som en opdragende, styrkende og dannende magt.*" (Mikkelsen 1884. In: Nielsen 1986)

Den basale ideologi og mening med faget sløjd, var i.flg. smed, maskinfabrikant og Dansk Sløjdlærerskoles grundlægger forstander Aksel Mikkelsen (1849-1929), at praktisk virksomhed med det manuelle arbejde i sig selv (igennem processen) indprentede grundlaget for det dannede og moralsk ansvarlige menneske i et samfund.

> " -- *Det er i det hele taget ikke børneskolens opgave på noget punkt at meddele en egentlig faglig uddannelse; dens opgave er at udvikle sådanne evner og færdigheder hos børnene, som har almindelig menneskelig værdi og som livet i det hele stiller krav til. Og det er det sløjden gør...Sløjden udvikler børnenes selvvirksomhed, hvad der har stor betydning for deres udvikling som personligheder; den udvikler og forfiner deres sansning. Igennem det praktiske arbejde lærer barnet at skønne, at iagttage, at sammenligne, at undersøge, at prøve, at finde på. Det er en naturlig og selvfølgelig opgave for børnene at se at få de ting, som de laver, så gode og smukke som muligt. Ved de*

> *fleste andre skolefag vil det for de fleste børn være pligtfølelsen, der driver dem dertil; da resultatet af arbejdet i sløjdtimen er en ting, som drengen skal eje og tage hjem med sig, vil selv den interesse, dette vækker hos ham, gøre ham flittig, nøjagtig, ordentlig og renlig. Der udvikles på denne måde hos børnene en sans for arbejde, en kærlighed til arbejde, som er af stor værdi for livet. Sløjden giver endelig også en direkte legemlig uddannelse."* (Mikkelsen: *Sløjden og dens Betydning som Skolefag. Et Par Ord til Hjemmene.* Dansk Sløjdlærerskole 1895 I: Nielsen 1986)

Denne formaldannende begrundelse af faget, blev af Mikkelsens efterfølgere ureflekteret forstærket i en sådan grad, at Georg Kerschensteiners teorier om arbejdsskole, og de reformpædagogiske strømninger i 20'erne og 30'erne, forblev lukket land for sløjdsagen.

Bedre gik det ikke de efterfølgende tiår, hvor fagets lærere gennem hård disciplin og strenghed - metodisk og i takt - indøvede tekniske færdigheder og materialekendskab. Praktisk virksomhed for dennes egen skyld, der bl.a. skal begrundes i skolens daværende vidensmonopol, der var sikret i den generelt rådende arbejds- og pligtkultur, hvor skolen forlængede disse dyder institutionelt.

De efterfølgende årtiers socialdemokratiske moderniseringsfremstød medførte, at skolekulturen tilnærmelsesvis blev bragt på niveau med industriens krav, dog i et formaliseret udtryk. Sløjden fulgte i et vist omfang trop med 60'ernes kreative boom, men blev alligevel aldrig rigtig taget 'alvorligt'. Hvor skolens øvrige praktisk/musiske fag blev underlagt Danmarks Lærerhøjskole, hvilket medførte forskningsforpligtelse, fortsatte sløjden et relativt autonomt liv på de to sløjdskoler; Askov Sløjdlærerskole senere Sløjdhøjskolen i Esbjerg og Dansk Sløjdlærerskole, der som eneste sted i landet varetog efter/videreuddannelsen af sløjdlærere i Danmark. Sløjdskolerne er ministerielt afskåret forsknings-muligheder, da denne forpligtelse alene ligger i regi af Danmarks Lærerhøjskole, som dog til dato endnu ikke har påtaget sig opgaven på trods af oprettelsen af den faglig pædagogiske kandidatuddannelse i sløjd. (Jvf. Holmbäck/Broge 1993).

Danmark indtager på dette punkt en kedelig særstilling ift. vores nabolande i Skandinavien, der alle i forskellig grad har påbegyndt forskning indenfor sløjdområdet.

Undervisningen på seminarierne

Fagets manglende videnskabelige basis har medført en undervisnings-praksis rundt om på seminarierne, der i overvejende grad begrundes på en overleveret personbunden oftest temmelig ureflekteret prakticisme, hvor viden og erfaring omkring teknikker og metode formidles fra lærer til lærerstuderende, fra generation til generation over øvelser i de velkendte modelrækker.

Undervisningen af de liniefagsstuderende på seminarierne og af kursisterne på de to sløjdlærerskoler har på denne baggrund haft en udbredt instrumentel (Peters 1980) karakter omkring færdighedsindlæring, hvor middel og mål står i ydre forhold til hinanden. På grund af fraværet af en sløjdpædagogisk teori er pædagogiske og didaktiske overvejelser og eventuelle formidling af disse overladt til den enkelte lærers personlige vurdering og eventuelle pædagogiske engagement.

I praksis har liniefagsundervisningen på seminarierne været båret af en fastholdelse af, at formålet med det hele var, at indøve akkuratesse, systematik og påpasselighed omkring en reproduktionen af fastlagte på forhånd definerede og målsatte sløjdgenstande. Forløbet afsluttedes med den såkaldte 6-timers prøve i sløjd (afskaffet sommeren 1996), hvor den studerende på bedste svendeprøvevis blev kontrolleret i bemestringen af traditionelle håndværksmæssige færdigheder i tæt slægtskab med snedkerfagets metoder, hvor samlingsteknikker fra fortiden skulle indgå.

Konsekvensen af disse forhold har i stor udstrækning medført at sløjd temmelig ukritisk, og uden indblanding udefra, har reproduceret sig selv til en praksis i dagens skole, som ikke ligger langt fra de oprindelige tanker og metoder fra århundredeskiftet.

Det formaldannende efterslæb

Forestilling om det formaldannende har fulgt sløjden fra århundredeskiftet og behersker frem til i dag i overvejende grad de dannelsesmæssige overvejelser, der ind imellem dukker op på sløjdarenaen:

I et kompendium til de sløjdstuderende *Smedning - en kulturteknik* Jonstrup Statsseminarium 1989 står der om den pædagogiske anvendelse at læse:

(Understregningerne er Daniels.)

> *"Der er flere grunde til, at det ikke er tilstrækkeligt at tale om smedning. De vigtigste af dem vedrører de forskellige former for værdier, der er knyttet til praktisk arbejde."*

Subjektive værdier

> *"--Enhver der har 'kæmpet' med fremstilling af et praktisk emne, og som under denne kamp har opdaget 'jeg kan', vil have en fornemmelse af de udviklingsmæssige værdier--"*

Objektive værdier

> *"--når vi i folkeskolen beskæftiger os med praktisk smedning, så er det ikke udelukkende på grund af den økonomiske værdi og udviklingen af identitet, så er det også for at bruge denne 'praktiske episode', denne oplevelse af materialer og værktøj til at 'lukke op' for en personlig erkendelse og forståelse. Når man har stået med essens varme mod ansigtet og klangen af hammer og ambolt i ørerne, ved man noget om, hvilke følelser og tanker det kan sætte igang."* (Daniel 1989, 45.)

Jeg skal ikke betvivle Daniels ord. Han mener det! Men hvordan kommer jeg til at opleve det samme?

Enhver fagkultur indeholder former for 'indre' værdier, former for indforståethed omkring særlige stemningsmættede oplevelser, som nærmest ikke kan ekspliciteres. Begejstringen over det sublime, det eftertragtelsesværdige, som for den ihærdige dukker op ved sjældne lejligheder, er en grundlæggende drivkraft for et fag og dets udøvere. Det er basalt for et fags identitet og potentielle mulighed for at begejstre nytilkomne. Mangler begejstringen er der kun middelmådighed tilbage - samt en lang række af halvdårlige forklaringer, som jeg selv har hørt på det meste af min egen skoletid. Men hvem kan holde begejstringen kørende, hvis undervisningen omhandler de samme trivielle teknikøvelser år efter år?

Daniel er begejstret, 'stemt'. Det er det han gerne vil formidle i sin tekst, men ser jeg på teksten med andre øjne, i et forsøg på at aflæse et dannelsesindhold, må jeg konstatere at jeg også kan tolke de ikke nærmere definerede påstande om *personlig erkendels* og *udviklingsmæssige værdier* som værende af formaldannende karakter. Daniel problematiserer i øvrigt selv fagets formaldannende efterslæb andensteds. (Jvf. Daniel 1993)

Denne (evt. ikke tilsigtede) fastholdelse af det formaldannende, skal bl.a. forstås i lyset af fagets selvrefleksive isolation. Sløjd har ikke, som en stor del af skolens øvrige fag, en videnskabelig disciplin at 'læne sig' op ad i sit begrundelsesbehov, hvilket afstedkommer at faget i sin begrundelsestvang (som skolefag), på linie med håndarbejde og andre af de praktisk-musiske fag, nemt kommer til at søge sin legitimering i forhånden værende pædagogiske slogans. I tresserne var det *in* at udvikle det musisk-kreative, hvilket mange af de praktisk-musiske fag påtog sig som deres særkende. I dag hersker der tillige en udbredt og oftest ureflekteret opfattelse af, at disse fag, foruden at være kreative, indtager en urokkelig særstilling som værende ramme for æstetiske læreprocesser i højere grad end i skolens boglige og teoretiske fag, der i overvejende grad opererer med kognitiv anlagt læring (jvf. Schou 1990). Denne adskillelse mellem det æstetiske og det kognitive, som værende af hinanden uafhængige størrelser, er en sørgelig uddannelsesideologisk realitet, der gør skolearbejde unødvendigt besværligt, men fordi nyliberalistiske uddannelsesøkonomer forsøger at organisere tilværelsen på denne måde, er det jo ikke ensbetydende med, at læreprocesser lader sig underordne sådanne principper.

(Undersøgelser viser i øvrigt at professionudøvelse sjældent udføres i overensstemmelse med en normativ etik (fx. den uddannelsesideologiske eksternaliserede udlægning af karakteren af pædagogens arbejde), men i højere grad håndteres på baggrund af en habitusafhængig (Bourdieu 1990) 'praktisk sans', der udspiller sig spontant. (Jvf. Andersen 1995)

I slutningen af 80'erne gennemførtes en lang række udviklingsarbejder under Folkeskolens Udviklingsråd. I det efterfølgende evalueringsarbejde bl.a. omkring de praktisk musiske fags begrundelse, fremførte disse fag enstemmigt, at de opfattede deres væsentligste virksomhed som værende fag, der i særlig grad var 'personlighedsudviklende'. I den overordnede faglig pædagogiske sammenfatning af de afsluttende evalueringsrapporter stiller man sig dog skeptisk til disse påstande:

> *"--sagen er, at vi når alt kommer til alt ikke ved om disse fag faktisk er personlighedsudviklende. For at kunne komme frem til et svar, er det nødvendigt at nå til enighed om, hvad der så i givet fald forstås ved 'personlighed' og denne diskussion er aldrig blevet ført for disse fags vedkommende, i det mindste ikke hvis man ikke vil lade sig nøje med at definere 'personlighed' som et sæt menneskelige dyder. Det kunne man gøre for et hundrede år siden; men det går ikke nu."*

(Jensen, m.fl: *Folkeskolen, visioner og konsekvenser* Folkeskolens Udvik-lingsråd 1992, 128.)

Personlighedsudviklende eller ej?

Vidensbegrebet og dannelsesovervejelserne i sløjdfaget er under alle omstændigheder en mudret størrelse uden egentlig teoridannelse som baggrund for, hvad der skal foregå i undervisningen eller hvad undervisningen egentlig skal bibringe den enkelte elev. I øvrigt et spørgsmål som de fleste fag må revurdere i lyset af den kulturelle modernisering, som generelt har gjort det vanskeligt at være skråsikker omkring hvad viden er for en størrelse.

Klangen af hammer og ambolt

Hvis læseren lige genkalder sig 'klangen af hammer og ambolt' samt mine påstande om fraværet af anvendelige fagdidaktiske overvejelser, vil jeg knytte et par yderligere kommentarer til citatet, idet jeg finder at sløjdens emner, i en hvis udstrækning gennemføres og udleves med en selvforståelse (såkaldt førbevidst, Bourdieu 1984), der er bundet op i en teknisk, materialemæssig og udpræget mandlig fascination, hvor 'fornøjelsen' ved selve arbejdsprocessen tages for givet hos læreren, og betragtes som i sig selv motiverende. Konsekvensen heraf er nemt, at emnet underordnes produktet, og den dybere mening forsvinder med mindre man, som elev, er indehaver af en habitus (jvf. Bourdieu & Passeron 1990), der korresponderer med lærerens.

En sløjdlærer beretter således i dag:

> *"I sløjd kunne man tidligere få børnene til at stå og arbejde med tingene, til de havde et godt og færdigt produkt, som de var lidt stolte af. Nu siger de tit "hvad fanden skal jeg bruge det til?" og så gør de arbejdet nærmest for lærerens skyld, har man indtryk af. Sjælen er slet ikke med mere -- Jeg bliver ked af at se den rodløshed og egoisme, som er kommet blandt børn -- jeg står helt magtesløst over for dem. Jeg kan tvinge børnene, jeg kan tvinge dem hen til høvlebænken, men jeg har ikke lyst til at være den type lærer, der gør det -- Man føler i de tilfælde at man ikke slår til--"* (Jacobsen 1989)

Den pågældende lærer har tydeligvis opgivet modet. Hans undervisningspraksis er blevet 'overhalet' af den kulturelle frisættelse, hvor børnenes krav om væsentlighed forekommer mere fornuftige end egoistiske, som læreren udlægger det. Hvis produktmålet overlejrer processens mulige æstetiske potentiale, vil det ofte henvise til og fastholde overdrevne og ureflekterede sociokulturelle / skolekulturelle reproduktionssammenhænge, som vil afskære udenforstående for reel deltagelse, idet arbejdet *netop ikke* af sig selv giver mening. Når de gamle arbejdsredskaber, metoder og deres brugsværdi tages ud af deres oprindelige sociokulturelle samtid, og genfremstilles i sløjdlokalet i en postmoderne hverdag, tilsløres den oprindelige betydningssammenhæng, produktet individualiseres, tingsliggøres og bliver betydningsløst som læreproces. Konceptet er selvmod-sigende. Børnene syntes at det er *kedeligt*, og læreren ræsonnerer, at *sjælen er slet ikke med mere*.

Læreren er som kulturbærer og kulturformidler en betydningsfuld agent for den sociale og kulturelle reproduktion. Hvad der for læreren fremstår som kulturelt 'selvfølgeligt', kan af eleverne opleves som fremmedgørende.

Den kulturelle pluralitet, eleverne repræsenterer ved deres blotte tilstedeværelse i dagens skole, må imødegås med åbenhed, og ikke blokeres såkaldt førbevidst igennem lærerens egen selvforståelse. Det er de voksne der skal imødekomme eleverne, og ikke omvendt børnene der skal forstå lærerens motiver, i hvertfald ikke som udgangspunkt!

Der er meget der tyder på, at hvis et fag som sløjd skal overleve, og det vil sige begrunde sig i tidssvarende fornuft, så skal det for deltagerne fremstå som 'rummeligt', således at den egenkultur faget og dets lærere er bærere af, ikke er et 'must', men en erfaring der kan inspirere og bruges i en kulturel videreudvikling/ nyorientering.

Fornuft

I den klassiske opdeling af verden i tre selvstændigt organiserede vidensområder, hhv. videnskab, det *kognitivt-instrumentelle* - moral, det *moralsk-praktiske* og kunst, det *æstetisk-ekspressive* professionelt bearbejdede videnskompleks indeholdende hver sin lovmæssighed, selvstændige historie og egenmæssighed sejrede det naturvidenskabelige såkaldte objektivistiske videnskabssyn over æstetikken.

Æstetikken blev isoleret i det kunstneriske produktionsfelts magtmonopol. I livsverdenssammenhæng udstødtes subjektets foretagsomhed til 'private' aktiviteter, kategoriseret som hobby og tidsfordriv, idet den indvundne (kulturelle) rationalisering ikke successivt tilstrømmer hverdagens livspraksis. Hvor de kognitivt opsamlede potentialer ideelt skulle gøres anvendelige til en fornuftig gestaltning af livsforholdene, forhindres dette i stedet af de uddifferentierede værdisfæres egenlovmæssighed, der adskilt fra hverdagen ikke enkeltvis og isoleret kan tilbageføres meningsfuldt til livsverdenen. (Jvf. Habermas 1981a)

Fra videnskabens empiriske begrundelsesfundament er der dog, i takt med den kulturelle modernitets tiltagende kontekståbenhed, sket et skred i vores generelle opfattelse af hvilke kriterier, der skal definere fornuft. Et skred der fordrer inddragelse af etiske, emotionelle og æstetiske faktorer, som fornuftbærende elementer i mulige tilværelsesfortolkninger.

P. Gundelach og O. Riis har i en undersøgelse af danskernes værdier konstateret en 'forhandlingsmoral', som de betegner det. En moral der er procedurelt begrundet:

> "*Det tyder på, at forhandlingsmoral er en generel og jævnt udbredt værdi, der er blevet af større betydning gennem 1980'erne. Det hænger muligvis sammen med, at etiske og moralske spørgsmål er kommet mere til debat, og at det er blevet klart, at der ikke eksisterer én fælles moralopfattelse. Vi lever i et pluralistisk samfund, hvor diskussionen, samtalen, bliver et væsentligt medium for afgørelsen af moralske spørgsmål. Det indebærer, at befolkningen i mindre grad end tidligere accepterer en ydre autoritet(eksempelvis den overordnede). Man ønsker selv at deltage i diskussionen om, hvilke handlinger der skal udføres.*" (Riis/Gundelach 1992, 58f)

Viden

Videnskaber, teorier og empiri har stadig gyldighed, men må i stigende grad operere med væsentlighedskriterier i erkendelse af, at videnskab og vidensprocesser ikke længere kan accepteres som et tvingende, foruddefineret forhold mellem *Subjekt* og *Objekt*. Viden skal således ikke blot leve op til empiriske krav, men også underkastes etiske og æstetiske fordringer.

Endvidere er der sket et generelt brud i den enkeltes brug af et stadigt stigende udbud af viden og information. Informationsteknikken nedbryder tendentielt den tidligere autoritært hierarkiserede vidensstruktur: Informationsteknikken binder sig ikke automatisk og entydigt til et hierarkisk organiseret teknokrati, hvor kundskabsmonopolet i form af 'rationel' og 'godkendt' viden overført og formidlet af uddannelsessystemet, er den vigtigste forudsætning for de professionelle/ekspertkulturens magtudøvelse.

Opløsningen af den kulturelle entydighed, som er kernen i moderniteten, skaber uro, specielt indenfor uddannelsessystemerne, som i forvejen er tynget af et kulturelt efterslæb. Viden og normer er blevet flygtige produkter, som i stigende grad erkendes som vilkårlige: der kunne lige såvel foregå noget andet!

Viden er blevet afhængig af normativ selektion. Forestillingen om den værdifri videnskab undermineres dagligt gennem den risikoproduktion og udhuling af livsformer, som industrisamfundet selv afføder. Den videnskabelige fornuft er blevet erfaringsmæssigt utroværdig i forhold til almindelig 'sund fornuft', den sociale fornuft og hviler ikke længere i en tryg social tradition som ex. skolen. Den tiltagende kontingens truer og udspiller på længere sigt traditionel praksis som utroværdig og kræver fornyet eftertænkomhed.

Når virkeligheden i stigende grad erkendes som en vilkårlig social konstruktion, får praksis værkkarakter og individualiseres. Individualiseringen ophæver den tidligere kulturelle konsensus.

De subkulturelle bevidsthedsformer, som har kendetegnet sløjden bl.a. i kraft af en fælles klassehabitus (min påstand), opløses og fordrer en ny selvforståelse, der ikke længere kan bygge på tidligere anerkendte praksisformer, men som må udvikles og findes i selve det arbejde der udføres, mens det pågår. Procesaspektet bliver det meningsgivende og får afgørende betydning som drivkraft for den subjektive erfarings- og identitetdannelse.

Det traditionelle pensum sprænges

På dette grundlag bliver det sværere og sværere at foreskrive praktiske handlingsanvisninger til konkrete undervisningssammenhænge. Kriterierne for en fagdidaktik kan derfor ikke længere være mekaniske, men må nødvendigvis underlægges almendannende betragtninger, der som sit grundlag opererer med *form* frem for et beskrivende *indhold*.

Den tiltagende vidensmængde og dennes omsætningshastighed giver ideen om almendannelse en anden karakter, end vi tidligere har opereret med.

Samtidens viden kan ikke længere troværdigt repræsenteres i ét pensum. Det kan kun kanoniseres, som de nyliberale uddannelsespolitiske kræfter forsøger det. Dannelse bliver derfor et abstrakt, flygtigt og flertydigt begreb, hvor ethvert pensum nødvendigvis må være kontingent. Indholdet vil hele tiden kunne justeres efter lokale behov, hvilket ophæver det almene som vi traditionelt kender det. I stedet uddifferentieres sociale og kulturelle strukturer således at handlingssammenhænge frisættes, afmystificeres med mulighed for fornuftiggørelse, der kan åbne op for nye realiseringsmuligheder af sociale behov på flere niveauer. Videnskab og normer kommer i flertal, hvor samtalen mellem mennesker om hvad der er rigtigt og forkert bliver central.

Med Habermas (1981a) kan vi sige, at der opstår et paradigmeskift fra en subjektteori til en social teori om en kommunikativ etik, en diskurs-etik der indebærer normative krav om procedure, solidaritet og respekt. Normer bør kun være gyldige, når de kan accepteres af alle implicerede deltagere i en given praktisk diskurs. En sådant kommunikationsteoretisk rekonstrueret handlingsbegreb skulle gerne sikre at enhver sandhed er foreløbig.

Habermas' universalpragmatiske program (1981b) kan beskyldes for at være idealiseret, tillige med at dets evt. indfrielse har lange udsigter. Det er nok muligt, men hans kommunikative fordring er en inspirerende socialfilosofisk reference med en vis konsekvens, der kan fastholde ideen om et værdigt og ikke-formynderisk menneskesyn, som et centralt politisk-pædagogisk tema.

Med udgangspunkt i universalpragmatikken, kan vi inspireres til at skabe et indhold i uddannelsesmødet, som af gode grunde må være et temmelig åbenhjertigt projekt, hvor der ikke er en på forhånd fastsat facitliste. Et møde der åbner op for, at deltagerne overlades til selv at bestemme hvad der skal foregå indholdsmæssigt (jvf. Schou 1995).

Hvis vi uddannelsesmæssigt skal kunne håndtere og imødekomme den virkelighed, som her skitseret, kræves der en ændret lærerrolle end den vi kender. Lærerens fremtidige kompetence vil være kendetegnet ved, at han må erkende, at han ikke har svar på rede hånd, at han skal kunne håndtere situationer, som han ikke kender svaret på i forvejen, at han vil være nødsaget til konstant at arbejde med sig selv, kollegaer, fælles mål etc, hvilket er uvant, tidskrævende og besværligt.

Afsæt

Grunden til at jeg har kaldt mit projekt for *Ansats til en sløjdpædagogik* ligger i det forhold, at jeg som udgangspunkt anser sløjd, som værende et fag med mange kvaliteter, som temmelig mange mennesker er dybt engageret i, af grunde som jeg anser som værende fornuftige. Når jeg alligevel bruger så meget energi på at beskrive negative sider af faget, skyldes det at det er et skolefag, som i udgangspunktet må henvende sig bredt til eleverne, og nødvendigvis må begrunde sig som et pædagogisk projekt, der er båret af en vis rationalitet. Dette er åbenbart vanskeligt for faget, bl.a. fordi det er temmeligt 'sprogfattigt' fag. Det har ingen synderlig tradition for at eksplicitere og begrunde sine vidensformer til omverdenen, og når det gøres, holder det ikke rigtig vand.

Samtidig er det et fag som kæmper en kummerlig tilværelse set i perspektiv af den øvrige fagkreds. Faget har karakter af at være et lavstatusfag. Det er der flere grunde til, men det begrunder ikke, at sløjd ikke skulle have noget at byde på i det samlede skolebillede. For det tror jeg at det har, men forud for et sådant bud på en sløjdpædagogik, forekommer det mig relevant at få praksis beskrevet, med mulige pædagogiske refleksioner over denne til følge.

I det forgående har jeg skitseret en række problematikker som kendetegner sløjdfaget. Jeg har endvidere kort angivet sider af moderniteten, som aktualiserer en række kriterier for hvilke udfordringer skole, fag og uddannelse står overfor at skulle håndtere i fremtiden. Det er åbenlyst at gængs praksis på mange områder står overfor krav om fornyet eftertænksomhed.

Et fag som sløjd befinder sig på en række områder i en situation, hvor faget skal finde sig selv på ny gennem at klargøre hvilke pædagogiske og politiske spørgsmål, som er centrale og under hvilke forudsætninger disse skal behandles.

På den ene side lider faget under ikke at have nogen videnskabelig basis at reflektere over. På den anden side kan denne, ift. skolens øvrige fag, særlige stilling på længere sigt vise sig at være ganske nyttig, idet det måske er muligt at diskutere faget på ny, uden at skulle bakse med den teoretiske - ofte meget tunge og fastlåste - hierarkiske overbygning, som mange af skolens øvrige fag har i kraft af at være barn af en videnskabelig disciplin. Sløjd har traditionen at bakse med, men et eller andet sted er der også "frit spil", idet der ikke sidder en række autoriteter med de rigtige meninger, som det ville være uklogt at lægge sig ud med.

(Samtidig skal jeg på ingen måde underspille mine egne betingelser som forsker, idet udviklingen af problemstillingen og betingelserne for at besvare den, udspiller sig indenfor rammerne af en given videnskabelig praksis.)

Ved at overgå til en kommunikationsteori, som *afsæt* for en analyse af sløjd som en særlig fagkultur, problematiseres forskerens 'blik': hvem skal problematisere hvad på hvilket grundlag? Hvilket perspektiv skal anlægges på analysen? Hvor kan der hentes kvalificerende inspiration? Hvem ved noget og på hvilket grundlag? Hvorledes afgøre hvad der vil være relevant og ud fra hvilke kriterier?

I den situation som faget befinder sig i, mener jeg det vil være misforstået og meget lidt befordrene at udarbejde og nedlægge en ydrestyret fagdidaktisk ramme over faget, idet en sådan på trods af sin eventuelle stringens, vil svæve i sin retoriske ensomhed uden større mulighed for at appellere til en ændring af gængs praksis.

Forud for en teoriudvikling omkring sløjds særlige eventuelle brugsæstetiske potentiale, forekommer det påkrævet at søge at forstå og forklare hvad der er på spil, når der bedrives sløjd. Hvad mener fagets udøvere selv? Her sigter jeg ikke til en række spontane svar, eller til læseplansorienteret efterrationalisering.

Sløjd og beslægtet arbejde (generelt) må kunne betragtes som en given social praktik, der i nogen udstrækning eksisterer fordi det giver mening for deltagerne. Her sigter jeg bl.a. til en stor kreds af engagerede lærere, børn, unge (fritidsundervisningen) og voksne (folkeoplysningen), som af lyst arbejder i og omkring sløjdfaget, hvilket altså ikke automatisk garanterer pædagogisk tilrettelagte vellykkede skoleforløb!

Problemstillinger og metode

Sløjd har ikke baggrund i et videnskabsfag, men er i udpræget grad forankret i en praktiseret praktik, og en af denne afledt praktisk viden. Formålet vil bl.a. være at få beskrevet de eksisterende praktikker med sigte på at forstå og forklare, hvilke forhold der med rimelighed kan siges at bære den eksisterende sløjdpraksis.

En sådan praktikteoretisk forskningstilgang, der bl.a. har afsæt i Pierre Bourdieus videnskabelige teori om praksis og om viden (praxeologisk teori, jvf. Bourdieu 1990) skulle gerne gøre os klogere på en forståelse af hvorfor vi i skolesammenhæng har en bestemt sløjdpædagogisk praksis? Hvilke baggrundsfaktorer har været og er bestemmende for denne praksis, og hvilke forhold definerer egentlig en sløjdpraksis?

Undersøgelser skal bl.a. foretages med sigte på at afdække forhold, som af fagets udøvere, betragtes som givne og selvfølgelige, men som i et uddannelsesmæssigt perspektiv kan være blokerende for pædagogisk refleksion.

Hvis faget, og dele af den selvforståelse som er meningsbærende for den enkelte i udøvelsen af praksis, således udsættes for en kritisk eksplicitering af handlerummet for de eksisterende praktikker, kunne der oparbejdes en teoretisk platform til afsæt for en kritisk stillingtagen til eksisterende fagdidaktiske overvejelser. En indsigt, som kunne befordre eventuelle ændringsstrategier der tillod begejstring i større målestok end det er tilfældet i dag.

Med afsæt i en analyse af de fremførte påstande, vil jeg koncentrere min forskning om følgende problemstillinger:

I: Hvorledes kan sløjdpraksis, der overlejrer de spontant formulerede og formelt pædagogisk begrundede aktiviteter, begribes og beskrives?

II: Hvilke forhold gør handlinger og praksis meningsgivende(i sig selv) når de udføres? Og hvorledes kan en eksplicitering af dette befordre udviklingen af en sløjdpædagogik?

Metode:

A: En empirisk forskningsforankring, der indbefatter indsigt i de teoriorienteringer, der påstås at have dannet grundlag for sløjd som skolefag. Hvad er årsagerne til at sløjd i eksplициteret form ser ud som det gør, og hvilke politisk/ideologiske tiltag iværksættes for at opretholde undervisningens legitimerende rolle?

B: Medtænkning og refleksion over egen forskningspraktik og selvforståelsen herom (objektivt, kvantitativt og strukturelt). Udviklingen af problemstillingen og betingelserne for at besvare den, udspiller sig indenfor en videnskabelig praksis, der er afhængig af sociale magtforhold, samfundets produktionsforhold og politiske strukturer. Et kampfelt hvor forskellige teoretiske positioner med forskellige interesser kæmper om retten til at definere hvad pædagogik er (jvf. Bjerg 1994).

C: Analysen af praktikkerne skal som udgangspunkt foretages i overensstemmelse med den selvforståelse/praktiske sans, som praktikerne selv lægger for dagen (i form af en internalisering af objektive livsvilkår og handlemuligheder). Dette med henblik på at kunne finde og forstå den meningshorisont, som er gældende i feltet (jvf. Holmbäck 1990) og som er meningsgivende for den enkeltes sociale og kulturelle reproduktion (i form af subjektive dispositioner, der fungerer som praktiske (tavse) skemata, som orienterer iagttagelse, tænken, vurdering og handlen (subjektivt, kvalitativt og fænomenologisk)).(Jvf. Bourdieu 1973 samt Callewaert 1994, 13-19)

D: En komparativ analyse af de i punkt A, B og C skitserede tilgange og perspek-tiver. Ved at medtage punkterne A, B og C, som hver især repræsenterer en selvstændig metodisk tilgang, i en samlet analyse, gøres der forsøg på at nuancere forskerens perspektiv, således at forskningens resultat, i den udstrækning det er muligt, ikke tilskriver praktikeren en praktik eller kundskab som i virkeligheden kun afspejler forskerens såkaldte objektivistiske rekonstruktion af en praktik. Videnskab er i sig selv en social konstruktion og et symbolsk system.

Det som analysen gerne skulle bringe med sig, er en større opmærksomhed på og indsigt i hvorfor den filosofiske idehistorie, den didaktiske teoriudvikling, praktikerens formelle uddannelse, skolen som pædagogisk rum og læreren som social agent ikke kan klassificeres og sættes på en formel, som udtryk for enhed. Intentionen vil være at præcisere hvilken kompleksitet en fagkultur som sløjd optræder i. Ligeledes ønskes den fagkulturelle kontekst belyst med henblik på at formulere en ansats til hvilke særlige faglig-pædagogiske problemstillinger, der er centrale for udviklingen af en fagdidaktik for sløjd.

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Every Time is Time for Craft

Abstract

The article deals with human productive activity as a process that generates culture by different means of production. The things produced by means of different techniques (i.e. the external results of the productive activity) accumulate either vertically so that the new products are always superior to the old ones and replace them, or horisontally so that the new products together with the old ones form a new enlarged whole. In applying different production techniques the individual also seems to view time in different ways. Some techniques are linked with the producing person's linear concept of time where time is seen as one of the factors in the production. In others, the producing person views time as a process. These two characteristics of human productive activity separate the products and techniques that lose their significance as they get old from the techniques that remain significant in the course of time.

Keywords: Craft, human productive activity, accumulation of products, concept of time in production.

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Every Time is Time for Craft

Instruction

Human culture was born and still develops as a result of man's productive activity. Having begun to produce their food and build their dwellings people extended their activity also in other spheres of culture. Civilization developed quickly, especially in areas where agriculture was easy and gave good crops. For example the River Nile in Egypt and the River Tigris and the River Euphrates in Mesopotamia enabled a high cultural standard in these countries very early in history.

Thoughts and ideas, such as law codes, are among the oldest written documents of man's abstract productive activity. Stories, myths, legends, poetry, songs, symphonies as well as dances and theories all result from man's need to create things.

A number of man-made concrete products date back to even earlier times than some of the abstract ones. The oldest cave paintings and sculptures date back to the palaeolithic stone age (appr. 25,000-10,000 years B.C.). Some Cretan artefacts, which stand closer to our culture, were made about 2,000 years before the beginning of our era.

Some products are worn out during the individual's lifetime, a lot of them are forgotten or just lost. However, culture, which was born of man's need to create things and still develops as such, keeps expanding in the world. In some cases the expansion is not problematic: there is always plenty of space for more symphonies in the world; they do not obviously do any harm. Too little grain is still produced in many countries; more could be produced. On the other hand, the growing amount of some products keeps worrying us: Where for example can we hide all nuclear waste? How can we destroy dangerous poisons and the useless, non-decomposing junk in nature?

According to Heidegger, man's existence in the world manifests itself in constructing (1985, 140-141). However, very little research has been done on the different ways in which human productive activity is realized. How do they differ from each other? How have they changed in the course of time? Which of them have survived and which have been forgotten as out-of-date - and why?

In this article my purpose is to describe human productive activity as well as the ways in which its external results accumulate and how the producing person's concept of time manifests itself in the process.

Human Productive Activity

In discussing the nature of the theory of craft education, Juhani Peltonen has come to the conclusion that the fundamental framework of the theory is formed on the basis of the theory of productive activity, which in turn consists of three separate principal theories, viz., the theories of 1) the technology of and 2) the didactics of the producing process as well as 3) the technology of product construction (Peltonen 1995, 60).

Although Peltonen only discusses one aspect of human productive activity, i.e. craft, and more specifically craft as a tool in education, his outline of the theory can also be applied to this activity in general.

In discussing the present topic, the first principal theory presented by Peltonen is also the most interesting. According to him it describes the control of the techniques needed in the producing process (1995, 61), i.e. it describes both the way the process is being carried out and the skills and attitudes required of the individual that carries it out. To explain all this is of great importance for us so that we can assess the significance of the various production techniques and discuss the reasons why some techniques are preferred and others rejected in our society in general and in our educational system in particular.

In this article, human productive activity is partly defined as an activity the external results of which manifest themselves in the human culture on our planet. This culture is expanding and developing in both quantity and quality. However, it can also be defined as human activity the external results of which are destroying our planet and its cultures. Below, I will first classify these results according to Karl Popper's (1977) theory of the Three Worlds. Thereafter, I will define the different techniques used in producing the results thus classified. Finally, I will discuss the ways the products made by means of the different techniques accumulate and the way the producing person and his production in different techniques relate to time.

The Classification of the External Results of Human Productive Activity According to Popper's Theory of the Three Worlds

Human productive activity gives both internal and external results. The internal ones are inner qualifications, i.e. abilities within the producing person (Kojonkoski-Rännäli 1995, 60-61). Man develops by performing something. He looks for information and, through it and through his experiences, learns to understand things and how they are related. By making things he develops his skills and prepares to act as a human being, i.e. performing in a productive way. From the point of view of man's development the internal results of this activity are very interesting.

The phenomena that we recognize as human culture consist mainly of the external results. For this particular reason they are of special interest as to the present article. Karl Popper (1977) developed his theory of the Three Worlds within which we can find the grounds for classifying all the external results or products. Below, a short presentation of Popper's theory will be given.

Popper's *World 1* is made up of all the things of the physical world: all material bodies, processes, energy, fields of force as well as all living beings, since they, too, are material bodies. All World 1 things are process-like open molecular systems in interaction (Popper 1977, 36.)

World 2 consists of mental conditions the reality of which is verified in the fact that they interact with the World 1 things. Some conditions are both mental and physical, e.g. a toothache, while others interpret human activity, e.g. ambitions, hopes and desires. (Popper 1977, 36-37.)

World 3 is made up of thoughts, ideas and various abstract products like stories, explanations, scientific theories and problems as well as social institutions and works of art. Many of the World 3 objects also exist as material bodies, e.g. paintings and books. In regard to their physical form they also belong to World 1. The reason why these objects are regarded as parts of World 3 is their unchanging content despite the changes in their physical form (different reproductions, editions etc.). Popper says that the real existence of World 3 is verified in the fact that the things in it make people generate more World 3 things and, in this way, make them reshape World 1. (Popper 1977, 38-39.)

According to Popper's theory it can be said that the external results are either included in 1) World 1, in which case they can be defined as *concrete material objects*, e.g. buildings, machines, equipment, food stuffs etc., or in 2) World 3, in which case they are defined as *abstract things*, e.g. thoughts, ideologies, ideas, theories, poetry, musical compositions etc.

The Techniques Used in the Productive Activity

What are the techniques used in creating these external results, i.e. concrete World 1 and abstract World 3 products?

Both man-made World 1 things and World 1 natural beings are material bodies. In producing them the individual needs both matter and the necessary tools as well as his own body, especially his hands to work it. In this case the production techniques can be defined as 1) *being based on craft techniques*, 2) *being based on modern technology* and 3) *producing art*.

Popper's World 3 only exists as a whole in abstract products. Their production techniques consist of making use of creativity, intelligence and problem solving ability; their material consists of observations, knowledge and experiences. This kind of *production* is verified in 1) *philosophical theorization*, 2) *research within different sciences* and 3) *producing art*.

Producing art is found on both lists. This is due to the fact that the techniques generally used in producing art go with both. The works of the visual arts are often made by means of craft techniques (e.g. sculptures) or by means of modern technology (e.g. video art). Naturally, an artist can make a rootstock or a bicycle's handlebar or saddle into a work of art on an art gallery wall by using his imagination only. This is what Picasso (1881-1973) did. In producing such works of art, no technique used in molding the physical world has been applied. In contrast, the techniques in producing other types of art, such as music and poetry, clearly belong to World 3 techniques.

Art is an open concept in continuous expansion. No materials and techniques can be ruled out in producing it, neither can its existence be limited by any definitions. (Kojonkoski-Rännäli 1987, 100-110.) However, in general it is hard to make a distinction between abstract and concrete producing. When looking at the man-made things in Popper's World 1 from the point of view of their production techniques one can find that in producing them also World 3 techniques have been used, although most things only seem to belong to the material World 1. Hardly any man-made concrete object exists without the background of creativity, problem solving or research results or without an expression of human ideology or thought. The making of concrete objects is an expression of the holistic nature of human productive activity which requires many-sided skills. Abstract things are inevitable results in the process of producing concrete objects, whereas the process of producing abstract things does not result in concrete objects.

In spite of the holistic nature of human productive activity, we can classify its results into concrete and abstract products and its techniques into craft techniques, modern technology, philosophical theorization and research and in this way get a useful tool in analysing the ways of product accumulation and the concepts of time connected with the different production techniques.

Below I will try to answer the following question: How do the abstract and concrete external results of human productive activity accumulate, on one hand, in philosophy and the sciences and, on the other hand, in the production based on craft techniques and modern technology?

The Accumulation of the External Results of Human Productive Activity

Vertical Accumulation

The view on knowledge accumulation, a kind of accumulation of truths, is a part of the classical concept of the sciences (Niiniluoto 1983, 206). Generally speaking, knowledge accumulation does not only mean increased quantity but also increased quality of knowledge. According to Thomas Kuhn, among others, the conventional sciences are 'extremely accumulative', which implies that the increased extension and precision of scientific knowledge has been successfully managed (Kuhn 1994, 64). The accumulation can thus be regarded as vertical, i.e. the new, better knowledge accumulates 'on top of' the old one and replaces it. According to Kuhn, since the sciences are revolutionary by nature, the accumulation is interrupted from time to time by new and unexpected research results, but it will continue after the revolution (1994, 76; Cohen 1994, 165).

Kuhn's chain of thought was presented in his book *The Structure of Scientific Revolutions* in 1962, but the idea of the accumulation of scientific results has been in existence since the first half of the 18th century (Cohen 1994, 21). The discussion was about the sciences after the time of the Great Scientific Revolution, especially about modern natural science. In his history of mathematics Boyer says that mathematics expands through additions, which, however, do not necessarily eliminate irrelevancies from previous knowledge whereas natural science primarily expands as new and better theories replace the old and weak ones (Boyer 1994, 474).

Modern technology is based on modern natural science and developed through technology, which is an applied science that makes use of the results in natural science. It is a production technique that has been expanding tremendously ever since the birth of modern natural science, in particular during the last few decades. The results in modern technology also accumulate vertically. This is natural: since the new scientific results underlying the production are always superior to the old ones, the new technical solutions also necessarily make the old solutions seem out-of-date. To keep producing new technical solutions has become an end in itself. It is only justified by the economic profit that the producers make (e.g. Siltala 1996, 117-118).

Horisontal Accumulation

According to a number of researchers, the view of the accumulation of scientific results implies that knowledge is understood to mean dead matter that can be collected. However, if knowledge is understood as an active aspect in human cognition and as an active resource existing in the individual's background, thoughts and action, then it accumulates horisontally. This accumulation implies an expansion of 'the abstract tool kit', as Eisner puts it (1991, 210-211.) Similarly, according to Cohen, only natural science is accumulative in the sense that Kuhn meant, while the humanities and the social sciences are not (Cohen 1994, 164-165).

Horisontal accumulation was characteristic of natural science before the birth of modern science at the beginning of the 17th century. Through a change in the way of thinking, modern science rose to the level of 'reliable science', thus becoming vertically accumulative.

Thanks to scientists like Galilei, Torricelli and Stahl, even other scientists refused to accept the authority of nature. They no more regarded themselves as novices before nature but rather as judges looking for evidence (Cohen 1994, 25-26).

Cohen calls this change the emancipation of natural science from natural philosophy and regards it as a feature that defined the Scientific Revolution. In early days, natural science only made sense in connection with a uniform philosophical view of the world and man (e.g. Aristotle). The new natural science was dedicated to the study of separate phenomena without any prior knowledge about the whole. The problems within natural science used to arise from the general theory of knowledge or from metaphysics. Today, methods are sought to solve restricted practical problems with the greatest precision possible. (Cohen 1994, 166-167.)

Since the vertical accumulation of the results in natural science only began to take place after its emancipation from natural philosophy, we can draw the conclusion that philosophical theorization gives results that accumulate horisontally. According to William Whewell (1794-1866), who is regarded as the 'grandfather' of the historiography of the sciences (Cohen 1994, 27), the sciences necessarily need philosophy because their development requires not only a logical combination of facts but also clarifying and creating new concepts (Cohen 1994, 28). This, in turn, is exactly what philosophy should do (see e.g. Deleuze & Guattari 1994, 11).

Through new and clarified concepts thinking reaches higher and higher levels of generalization. However, the general is not necessarily better than the specific. Both of them are useful in different methods of approach.

Through new and clearer concepts new viewpoints are found to complete the old ones (Niiniluoto 1981, 279-281; v.Wright 1992, 62-63). In special cases the generalizations are tested and the ideas to make new generalizations are originated.

In production based on craft techniques the external results are special cases within the general priciples. In the results the ideas are materially carried out, and the general principles are in turn applied in the technical solutions. In this sense craft is similar to producing things by means of modern technology. The difference lies in the fact that in the former case the use of human energy and speed is limited whereas in the latter the possibilities of making things are unlimited. Therefore, the grounds for craft-based production must be restricted to making functional products, if we take heed of the user's point of view, and to satisfaction given by the producing process, if we listen to the craftsman. If the new product is better than the old one, it is only due to his limited skill and experience. A beginner's work is not labelled out-of-date when compared with that of a master.

A new craft-based product, realized from the idea to the finishing touches by one and the same person, is an idea that has got its material form in an individual solution of aesthetic and technical problems (Kojonkoski-Rannali 1995, 61-62). As such it takes its place among other products with their respective individual solutions and expands the new whole. Craft-based producing of things involves horisontal accumulation.

Human Productive Activity in Relation to Time

The Cyclic Concept of Time in Production

The relation between human productive activity and time is closely connected with the purpose of the activity, i.e. why the individual wants to produce. If this individual 'manifests himself in making things', as Heidegger puts it (1985, 140-141), then time is experienced as the very process of making (Thorsen 1995, 47). Time is explained as a cycle always returning to its starting point. It merges into the production process through the producer's experience. This cyclic concept of time dominated human productive activity till the beginning of modern times. The activity involved, on one hand, philosophical theorization and research within the different sciences closely connected with philosophy, and, on the other hand, production methods based on craft techniques.

These methods of production do not only belong to the past. Philosophical theorization continues to flourish also in our times and, since it is part of the essential nature of man, it will surely never cease to exist. In the course of time, scientific research has undergone a lot of changes and become more diversified as to methods and fields. Since ties between philosophy and many sciences have become fewer, they have been replaced by qualitative research methods that tie the research to the researcher's world of experience and intelligence (cf. Eisner 1991, 7-8). When these methods are used - mostly within the humanities and the social sciences - the relation to time is similar to that in philosophical theorization.

In craft the individual is totally concentrated on what he is making. Craft as an activity and a skill also comes close to philosophy; one deals with objects, the other with concepts, as Vilkka (1992, 1) says. Even if craft sometimes still gives financial profit, the main importance of craft for the individual lies in the fact that it is an essential activity in human life and necessary for the many-sided development of the individual (Kojonkoski-Rännäli 1995, 67-68). Therefore it is also a living part of human productive activity.

The Linear Concept of Time in Production

If productive activity is a means of attaining some other results beside its natural one, the producing person begins treating time as a linear concept. Time becomes as it were a space that one goes through (Thorsen 1995, 48) or a production factor that one has to economize on. This concept of time is characteristic of natural scientific research and production based on modern technology.

Man's concept of time began to change at the particular phase in history when production became paid labour and resulted in the fact that the producing person was no longer able to keep the external result of his production process for himself but instead was given a financial return as payment for his productive process. Making a distinction between paid labour and unpaid labour as well as between workplace and abode is a crucial factor in the cultural change during which the concept of time gradually became linear and mechanical time began to control the production process. That was when man began to make use of time. (Thorsen 1995, 41.

The slow change in the concept of time began in the early Middle Ages in monasteries, where the rigid rules included precise implementation of work and devotional religious exercises (Mumford 1984, 20). At the beginning of modern times in the 17th century, which also marked the birth of modern natural science, the change had a radical influence on people's lives in the occidental culture. The new concept of linear time revolutionized the whole concept of reality; however, its impact on people was not so total as is often claimed. Especially in connection with paid labour it first concerned some groups of people only. They had to be vigorously persuaded by the new-born 'management' (Salmi 1996, 39-40). For all people paid productive activity has never come true. Even today a considerable part of productive work in the world is unpaid (see e.g. Salovaara 1995, 35). A view of reality based on process thinking has recently risen on a level with the view of reality based on stable substance thinking, which, in turn, is related to a mechanistic concept of time. The former way of thinking, which dates back to antiquity, has always dominated the great philosophies of the Orient (Nurmi 1993, 122). It is closely related to the cyclic concept of time.

Summary

Figure 1 sums up the view of the two characteristics of human productive activity discussed in this article, viz. of the way the results accumulate and of the concepts of time dominating the different production techniques.

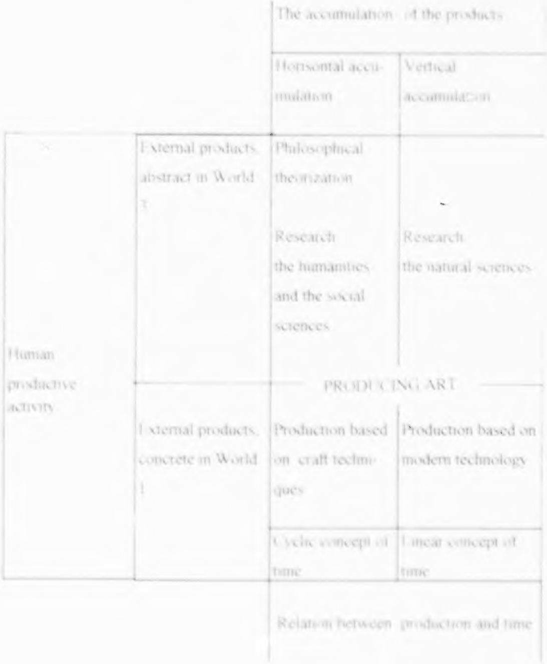
The accumulation of the products
Horisontal accumulation
Vertical accumulation
Human productive activity
External products, abstract in World 3
Philosophical theorization
Research the humanities and the social sciences
Research the natural sciences
PRODUCING ART
External products, concrete in World 1
Production based on craft techniques
Production based on modern technology
Cyclic concept of time
Linear concept of time
Relation between production and time

Figure 1.

The accumulation of products and the production - time relation in human productive activity.

The figure shows that both philosophy and research within the humanities and the social sciences produce abstract external results that accumulate horisontally and the production of which is linked with the cyclic concept of time. The accumulation of the results in the natural sciences is vertical and the concept of time in their production is linear. The activity producing concrete external results consists of production based on both craft techniques and modern technology. The results of the former type of production accumulate horisontally and are linked with the cyclic concept of time, whereas those of the latter type accumulate vertically and are linked with the linear concept of time.

Producing art is placed in the centre of the figure because art can be produced by all the different methods of production. However, the results in producing art are clearly horisontally accumulative and the concept of time is cyclic. It is true that art cannot become out-of-date, neither has making art any other purpose than art for art's sake - or has it? At this point I leave the question unanswered.

The name of this article, *Every time is time for craft*, is actually a conclusion that can be drawn from this discussion: only the production that is bound to expensive time limits and the new results of which always replace the old ones, can become out-of-date and insignificant. Instead, the fields of production which follow the cyclic concept of time and the results of which take their places side by side and extend the points of view of different things are always up to date and important to people. Therefore every time is time for craft. It can never become antiquated despite its economic unprofitability.

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Vägen till och genom ett konstnärligt utvecklingsarbete. ”Slöjd och bygga rum. Den skapande fantasin leken och rummet”

Abstract

Arbetet utgår från barns obändiga lust att bygga. Bygga rum, krypin, kojor, hus, ja kanske helt oväntad arkitektur. När barnen bygger rum att själva vara i eller som rymmer dockor, figurer, djur, fordon, etc. bygger de inte också - genom de intryck omgivningen gör - sin egen kroppshydda? De formar kvalitéer i sitt eget 'hus'. Ett 'hus' de livet igenom skall bo i. Omgivningen - människor så väl som ting - blir det 'förebildsmaterial' de skapar sitt fysiska höljes inre och yttre kvalitéer med.

Rapporten *Slöjd och bygga rum* (Rapport nr 30 Linköpings universitet, Skapande vetande 1996) presenterar resultatet av ett konstnärligt utvecklingsarbete som haft arbetsnamnet "den skapande fantasin och rummet". Rapporten innehåller förutom en teoretisk bakgrund även ett omfattande bildmaterial; skisser, teckningar och foton på möjliga utgångspunkter för rums-byggar-lek-material i trä.

Då en av grundintentionerna med föreliggande arbete har varit att sätta igång nya processer, öppna nya rum för lek, skapande och insikt, betyder det att jag önskar att presentationen av arbetet, skall vara väckande för både hand och tanke. Att det, för den som tar del av resultatet, leder vidare i ett just nu oförutsägbart skapande. Presenterat material vill således inte konservera och skapa efterapning utan inspirera till vidareutveckling av individuella idéer och lösningar i ett konstnärligt praktiskt perspektiv.

Sökord: Slöjd, bygglek, leksak, fantasi, arkitektur, gester.

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Fri lek

Jag har alltid förundrats, överraskats och fascinerats av barns lek. Speciellt den lek då barnen på ett fritt sätt väljer lekens innehåll och rekvisita och helt uppslukas av den! Den koncentration och den entusiasm de utstrålar när leken är som bäst, och de själva utan vuxnas ambitioner att informera, undervisa eller leda, prövar sina möjligheter, experimenterar och löser problem. Det är en lek där tingen förtrollas och förvandlas och inlevelsen blir identifikation, möten med kamrater och ting blir till förmågor och ‘kunskap’.

Huvudet vilar på golvet och blicken följer en liten figur som sitter i ett fordon som sakta kör över golvet. Ögonen följer koncentrerat förflyttningen över mattan fram till ett ‘klosshus’, där fler figurer samlats runt ett dukat bord. Huset har tidigare byggts upp och möblerats och bordet dukats med stor omsorg. Handen känner, prövar och ‘älskar’ föremålen. Barnet, drömmer och förbinder sig i leken som om den vore verklighet och omgivningen inte finns. Leken lever och förvandlas av önskningar, associationer och eventuella gemensamma överenskommelser. Men ofta är det också en ensamlek.

Hisnande resor förverkligas i det gångnas och kanske framtidens landskap. Är inte detta omedvetna konstnärliga upplevelser, konstnärligt engagemang, hängivenhet. Här övas vilja och förmåga till gestaltande och formande. Den stora världen blir kanske mer begriplig, men också denna lilla värld skapar formande intryck, genom de ting som får tjäna som fantasiobjekt.

Det här är i den lek där förmågan till reflektion ännu sover. Leken är ett slags entusiasmens 'världsrum' ända tills någon ropar - nu är det mat - eller, - nu måste du gå och lägga dig! Det är en slags lek som olika barn har olika behov av och lätt för. Säkert är det en lek som många barn missunnas av massmedialt överflöd, men skulle må bra av och utvecklas med. Något som vuxna allt för lite, intresserat, lämnar barn i fred med eller uppfattar är viktig. Som i viss mån står i kontrast till samhällstrendens syn på kunskapande. Krasst ur nyttoaspekt, eller sofistikerat dold i vårt språk och hela den elektroteknologiska stressen och utbudet av information och underhållning.

Den konstnärliga leken

Den 'konstnärliga' leken, gestaltandeleken, är något som allt för många vuxna inte tror sig behöva. Den hänförs till konstnärernas revir. Konstnären som genom sitt privilegium, och kanske inre drift får vara en slags underhållare åt omgivningen.

När vi anser oss inte behöva konsten som verksamhet och idé eller ser den som kanske till och med onödig förströelse och underhållning, har vi förmodligen missunnats den gestaltande leken som barn. För den leken sätter spår, formar, skapar kunskaper, bilder, minnen. I sin förlängning den vuxnes engagemang i ett kulturskapande liv. Är den inte också en förutsättningen för en fri rörlighet i det mänskliga tankelivet, för ett friskt och balanserat känsloliv? Den leken är viktigt att se allvarligt på, på alla nivåer, i såväl lekskola som högskola. Shillers kanske vid det här laget allt för ofta citerade ord är ändå här berättigade, "Människan leker bara när hon i ordets fulla bemärkelse är människa, och hon är bara helt och hållet människa när hon leker."

Konstnärligt utvecklingsarbete

I färden genom ett konstnärliga utvecklingsarbete, som jag nu vill försöka ge en bild av, har dessa reflexioner uppstått. Det har blivit ett slags återblickande på och en spegling av barndomslekens omedvetna drömmande och nyfikenhet, ur ett praktiskt *konstnärligt perspektiv.* Inte vetenskapligt; utvecklings-psykologiskt eller pedagogiskt-didaktiskt utan kanske just ur ett försök till konstnärlig inlevelse i lekens väsen genom ting och tankar. Barndomslekandets entusiastiska melodier klingar till en uppfordran att utveckla praktisk medvetenhet om leken som vuxen. Det är således med största allvar jag ger mig in i leken.

Jag har sedan snart 25 år tillbaka medverkat i utbildandet av förskollärare och fritidspedagoger i första hand i slöjdhantverk.

Sambanden mellan slöjdandet och leken växte tidigt fram som en naturlig förutsättning för studenternas praktiska övande i hantverk. Dels genom att söka skapa utgångspunkter för en skapande lek med material och tekniker, dels genom de uppenbara möjligheterna att i hantverkandet forma ting för barns lek. För studenterna har det delvis blivit en slags tillbakablick på sin egen barndoms lek, men genom det praktiska arbetet, en ny aspekt på lekens förutsättningar och rekvisita.

Lek och saker att leka med

Begreppet lek och leksaker har naturligtvis många ansikten. I huvudsak gäller i detta projekt den form av lek jag ovan beskriver. För många av de unga studenter jag möter har det oerhörda kommersiella, konserverande leksaksutbudet spelat en mycket stor roll. Barns lek när den gestaltar sig som ovan ges en bild av är inte en lek med leksaker. Den är en lek där barnen behöver förvandlingsbara saker. Hur skulle de kunna vara för att ge leken frihet?

När möjligheten, i slutet av åttiotalet, uppstod att genomföra konstnärliga utvecklingsarbeten inom 'mitt' universitet såg jag plötsligt möjligheten att genom eget experimenterande och gestaltande-formgivande sammanföra mina erfarenheter av slöjd med leken som process och begrepp i en egen konstnärlig 'lek'-process, i ett konstnärligt utvecklingsarbete.

I det första konstnärliga utvecklingsarbetet *Slöjd och lek lek och leksakers gest och karaktär* (Ekman 1991) var tingen (hästar, kor, figurer, fordon) i förgrunden. De formades huvudsakligen som enskilda ting utan hänsyn till vad de skulle betyda tillsammans. I detta senare arbete, har jag i princip samma grundintention och ovannämnda arbete är naturligtvis därmed också incitamentet till att *Slöjd och bygga rum* genomförts.

Den skapande fantasin och rummet

Intresset av att se ‘lekting’ inte enbart som enstaka former utan även som ting för rumsskapande blev tydligt redan innan publiceringen av ovan nämnda rapport. Jag ansökte således om och beviljades åter anslag till ett konstnärligt utvecklingsarbete med arbetsnamnet; *Den skapande fantasin och rummet.*

I detta arbete; *Slöjd och bygga rum, den skapande fantasin leken och rummet,* (Linköpings Universitet, Skapande Vetande 1996), som jag nu lite mer ingående vill försöka redovisa erfarenheter och resultat av, har de formade tingen således blivit förevändningar för möjligheter att bilda olika rumsligheter. Byggformerna jag experimenterat med, är i sig som objekt, naturligtvis inte mindre betydelsefulla än en återhållsamt formad häst eller en figur i trä. Dessutom används i leken ofta det mesta på överraskande sätt. Formgivningsproblemet blir dock något annorlunda. Målsätt-ningen i detta arbete, att forma spännande rumsbyggarmöj-ligheter, har därför krävt ett annat sätt att se på varje objekt. De blir huvudsakligen rumsformande objekt tillsammans med andra, och betyder inte så mycket var för sig. Deras form blir heller inte beroende av någon slags likhet till gest och karaktär med olika djur eller människor eller andra ‘verkliga’ företeelser. Ja till och med fordon är något mer bundna till sina förebilder i verkligheten, än former för ett slags ‘arkitektoniskt’ rumsbyggande.

Upptäcka rum

Själva rummet, som företeelse och uttryck, har dock inte varit lika lätt att fånga som det enskilda tinget.

I hög grad har arbetet utvecklat min tidigare intresse för arkitektur och erfarenhet vad som egentligen skapar rum. Rum mellanrum, tomrum helt omöjliga att ta i men ändå så verkliga. Jag har sökt mig in i 'rummen'. I ett av kapitlen i rapporten med rubriken *Upptäcka rum* försöker jag *se* rum, avgränsningar, utrymmen och beskriva dessa utifrån litteraturtexter, iakttagelser, ex av barns rumsbyggande, eller genom egna upplevelser i olika rum. Här smälter i viss mån min egen barndoms lek samman med mina barns lek. Genom detta förarbete har jag utvecklat min 'rumsblick'.

Arbetet bygger också på förvissningen om att känslan för rummet har både en arketypisk omedveten relation och ett genom de yttre sinnena erövrande perspektiv. Livet går från rum till rum. I bland är man själv byggmästare ibland gör någon annan arkitekt intrycket. Genom tingens intryck får vi material att själva bygga vår egen boning, kroppshydda och alla dess yttre och inre funktioner, fysiska själsliga och kulturella. Kroppen är en själen och jagets tillfälliga boning.

Alla de rum vi upplever och bygger i tiden mellan livmoder och grav har stort inflytande på våra liv, på byggandet av vår kroppshydda, kanske större än vi gör oss medvetna om.

Är rum också en förbindelseled en kommunikationsled, en väg, gång, korridor, tunnel, en trappa, en bro? Ja frågorna blir lätt många. Kanske är det just frågorna som är svaren? Detta är ju en upptäcktsresa, en utvecklingsväg, en lek, ett konstnärligt sökande. Tanken söker rum för att sammanfatta och förstå, men också öppningar för att komma vidare. Begränsningar uppstår ständigt och hindrar synfältet. I en skapande process måste murar och väggar rivas. Om bara det trånga egna tankerummet är tryggheten är utvecklingen hindrad. Dogmer är en slags väggar!

Att tänka över barnens lekting, och förnya dem är en liten liten början till att förstå hur många inlåsta begrepp som formas om lekens ting är allt för tidsbundna och omöjliga att förvandla. Varje ting måste förbli en möjligheter. Rummen och dess materiella förutsättningar måste öppna förbindelser, skapa kontaktytor, ‘möjlighetsutrymmen’. De yttre rummen får då positivt inflytande på det inre andliga frihetsutrymmet.

"Vi borde bygga för det "möjliga barnet" möjliga hus, rum och omgivningar. Denna uppgift fordrar ett estetiskt och ett konstnärligt sinne av dem som vill förverkliga detta". (Matti Bergström, Ur, Barnens liv rum och ting i Nordiskt perspektiv Kalmar 1992)

Den byggda bilden av oss själva

Allt rumsbyggande är *Den byggda bilden av oss själva* antyder Stefan Alenius i titeln till en essäbok vars titel och innehåll inspirerat mig. Både i nutid och i ett historiskt perspektiv i det yttre och det inre är detta realitet. Både individuellt och socialt. Det handlar om formen, om den är sann eller falsk i det perspektiv jag har utvecklat menar Stefan Alenius. (Alenius 1991)

Ett annat perspektiv bidrar Rudolf Steiner med i ett föredrag 1919: "Arkitektur och byggnadskonst är att projicera den mänskliga kroppens egna lagbundenhet ut i rummet". (Biesantz/Klingborg 1978) Då upplever vi kroppen som byggnad, kroppen som själsspegel i rörelser och gester, i arkitekturen.

Två utgångspunkter, det ena kanske mera själsligt och kulturellt orienterat, den senare med den fysiska kroppens möjligheter, som förebild. Givetvis är vi påverkade av båda och de väver i det dagliga livet samman till det oskiljbara. Inte minst i barnens bygglekande.

Alla de på något sätt omgärdade platser, orter, rum, miljöer och ting som vi genom livet ofrivilligt och kanske omedvetet, eller som vi genom vår egen kraft och nyfikenhet har vistats i och kanske själva byggt med byggmaterial, har otvivelaktigt varit formmaterial, på vägen mot vuxenlivet. Intrycken finns där och fortfar att påverka våra liv. De är oftast också starkt förknippade med olika människor vi mött i livet. Ja, nog är detta faktiskt just en förutsättning också för att detta arbete har blivit till. Samspelet mellan barn, mellan barn och vuxna, som förebilder.

Erövra rum

Erövra rum är rubriken på ett annat kapitel som berör och försöker belysa barnens erövrande av det fysiska och själsliga rummet och den vuxnes roll som kvalitetsmedveten förebild i formandet av ting och rum för en fri lek.

Genom att själv få experimentera med sin kropps och med tingens gränser blir barnen förtrogna med rummen och tingen. Rummen är ramar som lekarna och erfarenhetssamlandet rör sig inom och vidgas av barnen själva.

Det är relativt lätt att finna samband i rumsbyggande och rumsanvändarbehov med människans utvecklingsväg. Vägen ut ur grottorna från en av 'gudar'- påbjuden hukande vördnad till kolonnernas bärande av ett mer utvecklat individuellt medvetande. Är inte arkitekturen en spegling av en jagutveckling? Vilja, känsla och tanke som själskrafter bearbetas och utvecklas i barnens byggande. När de bygger kojor, när de bygger med byggbitar, när de 'bygger' sin egen kropp. Detta finns speglat i arkitekturens formhistoria. Alla formkvalitéer, formuttryck sammanfogas till en dynamisk helhet när människan funnit att rationella ensidigheter eller räta linjer inte ensamma understöder och balanserar hela människan. Kan det då också bli bilden av det mänskliga i människan, i dagens arkitektur?

Som ett exempel på mänskliga utvecklingssteg speglad av arkitekturen är den påtagliga skillnaden mellan det blockslutna egyptiska templet och det helt annorlunda sättet att bygga och placera ett tempel som grekerna åstadkom. Vägen in i det egyptiska templet var utstakad av en lång lång rad med sfinxer som vakade över att man ej avvek från den rätta processionsvägen. Pylonen var templets högresta framsida. Det grekiska templet kunde genom sin placering på en platå högt över landskapet ses av alla. Någon uttalad ingångssida markerades ej. Snarare uppmanade templet till att röra sig runt och följa till exempel frisens berättelse. Nog speglar dessa olika sätt att se och uppleva sig själv och sin relation till det gudomliga, ett förändrat medvetande. Allt sedan dess, genom uppgång och nedgång, har människan strävat efter mera ljus åt sina gudar, allt fler fönster i sitt eget boende och upplysning i tänkandet. Är det inte en liknande väg också barnen går. Men naturligtvis går inte heller de en rak väg.

Kan jag bidra med ting till, leken som underlättar och utvecklar barnens erövrande av rummet?

Formgesten - formens karaktär

Ytterligare en fråga som detta arbete fött är hur gesters själsliga och visuella karaktär och spännvidd kan ha ett förhållande till och en överensstämmelse med olika åldrars behov av intryck för sin trygghet, fantasi, för växande och utveckling. Frågan är naturligtvis komplicerad och eventuella i detta fall 'formsvar' fyllda av nyanser som är svåra att redovisa.

Genom ren iakttagelse kan man dock tydligt se att en moderlig, innerligt omfamnande och skyddande gest är något helt annat än en utåtriktad, beräknad och rationell gest. Att denna moderliga gest är nödvändig under många år är lätt att inse. Det för att kunna utveckla trygghet och mod att möta ett rikare formspråk och motstå andra ensidigheter. Här finns polariteter uttryckt i formgester som intresserat mig och som är utgångspunkt i sökandet efter form på ting att leka med.

Jag har, som grund för formandet av lektingen, försökt att något renodla olika gesters själskaraktär. För enkelhetens skull genom linjer som i sig således även får representera en tredimensionalitet. Uttrycket i en gest är sällan entydig utan innehåller nyanser från stark till svag, från liten till stor, återhållen eller överdriven, ärlig eller spelad etc. Men där finns gester som har ett mera viljeartat uttryck, andra ett mera rationellt ordnat tankemässigt uttryck. Så finns där det fantasifulla mötet den dynamiska skapande balansen mellan viljans och tankens uttryckssätt.

'Byggklotsar'

Med förvånande fantasilöshet, eller kanske är det av brist på praktiska initiativ och alternativ, utrustas förskolor och fritidshem med byggmaterial. Det är bygglådor i trä och plast och stora hopp- eller byggkuddar i galonöverklädd skumplast. Med få undantag rör det sig om grundformer som bygger på enkla geometriska lagar i ett begränsat antal storlekar och former, rationella, regelbundna 'moduler'. Deras förutsättning är ett teknologiskt mönster anpassat till industriell framställning. Men är de inte, i det perspektivet, motsatser till den viljeartade mer organiskt levande leken? Tillfredsställer de i sin ensidighet i formgester, tillräckligt barnens behov och lekfantasi? Vilka intryck gör de?

Och leksaker kan lätt bli lär- eller träningssaker. Redan 1922 talar Rudolf Steiner i ett föredrag, om det som nutida hjärnforskare uttrycker oro för.

> *"Jag vet inte om det är så i Västeuropa också, men i Mellaneuropa var det en tid en riktig epidemi att ge barn bygglådor, särskilt till jul. Då skulle de av enstaka kubformer, parallellepipedformade enstaka bitar sätta ihop någon sorts arkitektonisk förfärlighet. Detta är något*

> *som verkligen har en djup inverkan på barnen just med avseende på utvecklandet av fantasiverksamheten under dessa år, för de utvecklar ett atomistisk-materialistiskt sinnelag, de utvecklar sinnet för att sätta samman en helhet av enstaka bitar. Man tillmötesgår däremot det praktiska livet om man under de åren inte främjar förstånds-förmågan, förmågan att sätta samman, förmågan att bygga upp av atomer, utan i stället främjar den livliga, rörliga barnafantasin, som just har lösgjort sig från det som är så rörligt, levande inre arbete, den plastiska utbildningen av hjärnan. Därför måste man också försöka att så lite som möjligt leda in denna fantasi i stela, färdiga konturer.*" (Steiner 1994)

> *"-- för den enkla dockan sätter barnets fantasi i rörelse, eftersom barnet kan göra mycket av den, eftersom den inte tvingar in barnets fantasi i speciella former och konturer. Leksakerna skall lämna fantasin så fritt spelrum som möjligt. Därför att förståndet, intellektet, inte är fantasi, så är just sammanfogandet av allehanda ting inte precis det som tillmötesgår barnafantasins speciella art under de här åren."* (Steiner 1994)

Så den nutida hjärnforskarens iakttagelse:

> *"Inte ens barnens lekar, leksaker eller lekplatser innehåller sådana frihetsgrader som förr, utan tenderar till ändamålsenlighet som gör dem fattiga och icke kreativa och motbjudande för barn. Det ligger något absurt i det att man utvecklar sk. 'pedagogiska leksaker'. Leksaker eller lekar är inte 'logiska' utan tvärt om menade att leka med."* (Matti Bergström 1991)

De här tankarna och citaten har varit viktiga reflektionsytor när jag arbetat med konkret formgivning av utgångspunkter för rumsbyggande. Syftet har därvid varit att undvika byggsystemtanken. Undvika att göra två exakt lika former som pusslas eller monteras samman.

Sakerna i leken - hur de blir till

Möjligheterna att inför sina ögon se när lektingen tillverkas blir också viktigt med den här utgångspunkten. Lektingen får en förankring i en formningsprocess som barnen kan leva med i. Men det krävs av formaren att han tillåter användandet ur barnens fria initiativ. Vad har inte lego mm ställt till med, eller kanske redan Friedrich Fröbels klosslådor, ur det här perspektivet? Leksaker borde inte vara konsumtionsvaror!

Härmningsförmågan och lekförmågan förvandlas med tiden och fördjupas. Barnens föreställningsförmåga utvecklas och berikar leken. Leken blir mer och mer målinriktad, och fortfarande är det viktigt att tingen *inte* är uträknade och 'pedagogiska'. Tingen måste kunna vara trollstavar och trollformler till en levande lek. Rummen är förvandlingsplatser med ting att använda på många olika sätt i det som lekarna kräver. Men hur ser vi hindren? De är både inom oss och runt omkring. De yttre materiella överdrifterna ser vi kanske först. Men, upprepar hindren sig också inom oss, osynligare?

Idén med detta arbete är att föreslå vägar för vuxna att, som aktiva förebilder, berika barnens lek och formintryck inte presentera ritningar och mallar för tillverkning av leksaker. Men vuxna behöver mod att skapa.

Uppgiften jag påtagit mig blir en svår balansgång med allt detta som bakgrund. Utgångspunkter måste ses i förhållande till behov i olika åldrar. Även i skolan och på fritidshemmet 'bygger' barnen rum. Bygger på höjden och längden, prövar hållfasthet och balans, rytm och rörelse. Men vad som gäller i alla åldrar, tingen minns av både händer och ögon, möts av både känslor och tankar, skapar ofrihet eller frihet, konserverar eller utvecklar nyfikenhet och fantasi. Jag hoppas kunna göra sådant som utan överdrifter ger en rik variation i gester och karaktär.

Golv och tak, väggar och fönster

Följande syften och perspektiv har, sammanfattningsvis, fått bilda detta rumsprojekts golv, tak, väggar och fönster:

- Att experimentera med och formge 'lekting' som går att avgränsa och bygga rum och rumsligheter med. (Detta förutsätter inte att barnen kommer att använda tingen till endast rumsbyggande. Säkert finner de många fler användnings-områden).
- Att söka ge tingen form och kvalité som inte avser bestämda (mekaniska) system eller lösningar, hopfogningar utan är levande fritt föränderliga till sin gest och karaktär.
- Att påvisa möjligheter för föräldrar, och pedagoger inom barnomsorgen att själva tillverka ting för barnens 'rumslek', bygglek och i mån av mognad ta med barnen i denna formningsprocess.
- Att uppmärksamma den vuxnes uppgift, och kvalitetsansvar i ett vidare perspektiv, som förebild för handens arbete och barnens fria lek.

Perspektiv:

kvalitetsperspektivet: förebildlig kvalité, i rummet, på verksamhet, lek och saker barnen leker med,

arkitekturperspektivet: perspektiv på arkitekturens arketyper, hur har människor byggt och bygger i relation till hur barn kan få möjligheter att bygga.

förvandlingsperspektivet: den kreativa processen, livsprocessen, lek processen, formförvandlingen, den konstnärliga processen, den mänskliga utvecklingsprocessen.

Resultat, rumsbyggarformer

Arbetet har i hög grad pendlat mellan skissande, läsande, bildstuderande, skrivande och träformande. I ett paper som detta, utan fototryck, är det dock svårt att ge rättvisa åt tredimensionella ting. Rapporten *Slöjd och bygga rum* är rikt illustrerad och för de som väckts till nyfikenhet genom dessa rader ber jag att få hänvisa till rapporten för studium av alla rumsbyggarformer samt naturligtvis en mera omfattande text.

Utgång

Det här arbetet är följaktligen ett ifrågasättande av den ofta uppgivna förebildskultur som i dag dominerar vårt samhälle. Det finns därmed flera känsliga frågor att våga sig in på. Känner vi oss tillfreds med de kvalitéer vi kan erinra oss att vi själva fått med oss in i vuxenlivet, genom leken?

Håller de när påfrestningarna ökar? Vilka intryck formar barnen nu? Hur kan jag som vuxen utveckla mig själv så att jag kan erbjuda framtidens barn en högre kvalité i mitt sätt att vara och det jag erbjuder dem att forma sig med? Jag tror att vår tid kräver att dessa frågor ställs i fokus. I det här perspektivet förutsätter det bland annat utvecklandet av en medvetnare syn på föremålen för lek och rumsskapande.

Jag påstår, genom teori och praktiskt formande, att formen på de ting vi erbjuder barnen att leka med har stor betydelse. Att det mesta ofta är uttänkt men inte genomtänkt och genomkänt. Tingens material och form men också 'frihetutrymme' är viktiga kvalitativa utgångspunkter för ett formande och val, som barnen lång tid under uppväxten inte själva är utvecklade att ta ansvar för. Som vuxna har vi här ansvar och möjligheter som vi ofta inte besinnar och tar vara på. Vi ser gärna till lekens positiva livsbearbetande sidor. Fri lek (det vill säga den obundna leken, då barnen tar egna initiativ till aktivitet och kontakt med varandra) i förskoleåldrarna och i viss mån i skolåldrar accepteras allt mer som en viktig väg till kunskaps- och färdighetsutveckling till livserfarenheter, empati och social kreativitet. Men helhetskvalitén i leken, om vi skall sträva efter dessa mål? Spelar det ingen roll vad man leker med, hur tingen ser ut? Kvalitén och möjligheterna eller omöjligheterna i det barnen leker är vi i vid bemärkelse förebilder för. Detta är i sitt största allvar en kulturell medvetenhetsfråga. Vad som erbjuds dem att leka med har vi som vuxna som uppgift att ta ansvar för. Kanske är det lättare att börja med ting och rum än att söka förändra sig själv men i ärlighetens namn hör detta intimt samman.

Kvalité kräver ett val. Att välja blir både en estetisk och en etisk frågeställning. Att välja eller välja bort, att ge och avstå kan vara att förändra sig själv. Utveckla ett medvetande om nya vägar att 'formge' sin omgivning och öva sig i ett praktiskt konstnärligt formande!

Enligt min mening och erfarenhet är det här således inte ett val ur ett känslomässigt 'tyckande' att, -'det är väl en smakfråga och smaken kan man inte diskutera'. Frågan är betydligt djupare och viktigare än så. Människor som valt att arbeta med barn inom skola och barnomsorg behöver i det här perspektivet en fördjupad fortbildning när det gäller kvalitéer i hantverk, formgivning och konstnärlig gestaltning i förhållande till barns växande. Dessa frågor har inte betraktats som så viktiga i en barnpedagogisk utbildning hittills. Ett undantag är den waldorfpedagogiska förskollärarutbildningen, vilket också satt sina spår i den praktiskt pedagogiska verksamheten i waldorflekskolorna.

Själva slöjdhantverket med det som föreslås i den här skriften kräver inte omfattande kunskaper. Det bör därför inte, av den anledningen, vara några svårigheter att ta upp arbetet hemma, på en förskola eller ett fritidshem, även med lekande barn omkring sig.

Inspiration och idéer för utformningen av redovisat material är hämtat ur såväl naturens rika rumsformande som ur arkitekturens av människan skapade formhistoria. Oändligt mycket har jag inte hunnit bearbeta av de infallsvinklar som arbetet uppenbarat. Jag ser att det finns många många vägar att gå vidare. Barn och vuxnas fantasi och leklust kan få en rikedom av mötesplatser i ett sådant *Slöjd och lek-rum*. Nog kan det bli lite av en motvikt till all banalisering och kommersialisering av barnens lek och leksaker.

Ur en viss synvinkel kan materiel av den här karaktären ändå vara svårtillgängligt. Det lyser inte genast i ögonen. Av vuxna kräver det tillmötesgående och mod. Mod att själv vara skapande men också mod att avstå från ytlig glättighet eller förment pedagogiska ambitioner. Det kräver ett starkt förtroende för barnens fantasi och tålamod att vänta på barnens initiativ. Själv har jag haft många upplevelserika stunder när jag, som exempelvis fotograf, provat materialens möjligheter.

Konsten är att ge möjligheter, men ger också förvissning om att det finns något ännu inte uppenbarat. Konst är att ge fortsättningen en chans. Varje ting kan spegla också en annan värld av möjligheter. Tingen är väsen i konsten. Att betrakta barnen som den oförutsägbara framtiden är möjligheten. Låt barnen ge tingen väsen. Låt barnen visa att de är i förskoleåldern. Att de ofta upplever tingen som lika levande som de upplever sig själva. Låt de visa att de också i skolåldern fortfarande kan leka. Barnen kan nå något som vi vuxna kanske förlorat förmågan till men också kan hjälpa oss att återerövra.

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Integrating Technology into Sloyd in the Early Years

Abstract

Children are living in a very technological society. That's why they should have possibilities of becoming familiar with technology. This demand is fulfilled in some cases, but there is still a need and desire for development in this field. The aim of this article is to review how we can integrate technology into sloyd in the early years. At the beginning of the article, the fundamentals of technology education are dealt with; then the starting-points of teaching are presented and practical examples based on these are drawn.

Keywords: Early childhood education, sloyd, technology

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Integrating Technology into Sloyd in the Early Years

Introduction

We use home appliances, computers, information technology, energy, and many other technological products every day. We are living in a very technological society and today's children will be more and more dependent on technology in future. Should we as educators observe this change in society in our teaching? How could we do it, for instance, if we are specialized in sloyd? What actually is technology education in the early years? How does technology education relate to sloyd? According to much research we can presume that they are closely connected (see e.g. McCade & Weymer 1996; Makiya & Rogers 1992; de Vries 1996). This intersection of fields could provide possibilities of integrating technology education into sloyd.

Technology education for all

Dugger (1996) has found that because of its newness and elusive nature as a quantifiable discipline, the study of technology is often misunderstood and confused with other structures of knowledge. Technology education is a relatively new subject in the public school curriculum and it dates back to the 1980's as a global concept. While references to technology as a school subject can be found, it has been mostly targeted at 12 - 15 year-olds, now it is steadily expanding even to early childhood education. In the past decade a discernible technology education movement has gained world-wide momentum. Technology education is also known as Design and Technology.

Technology is, simply put, the study of our human-created world as contrasted to science, which is the study of the natural world. It draws its intellectual domain and modes of inquiry along the dynamic continuum that begins with human wants and needs and ends in the satisfaction of those wants and needs. Technology includes such human capabilities as producing, practical-problem solving, designing, inventing, innovating, communicating, and transporting. Technology should not be confused with 'technical.' The former is very broad in the scope of solving practical problems, and the latter is specific and involves in-depth skills and competencies to solve these problems. (Dugger 1996, 2-3.)

Blandow (1992) argues that technology is the know-how and creative process for utilizing tools, resources, environmental conditions, and personal capabilities in order to realize objectives and change conditions as well as to help individuals to overcome difficulties in typical every-day situations. Barnett (1994) also defines technology as a process.

Actually sloyd process is also technological process. Technology as a word bases words techne and logos, which means 'skill' and 'thinking'. In the sloyd process, especially if it concerns wood- and metalwork, we are converting natural resources to products or objects. In this article technology is seen as a larger concept than sloyd. Sloyd is a part of a field of technology and this article considers how we can learn something about the modern technological world with sloyd. If we review sloyd in a larger context than merely arts and aesthetics, we can learn to understand how man creates his technological world.

Change progresses very rapidly today and education concentrates more on general skill and less on knowledge. That's why technology education should not only be the instruction of technology, but also a process of developing thinking skills, creativity, innovation, and problem solving, a process which is strongly connected with the technological world. During this process one learns to understand, use, produce, and control technology in a meaningful way. Technology education is founded on learning hands-on how some mechanical process or phenomenon works. In addition to cognitive development, learning-by-doing also develops affective and psychomotor faculties.

Technological instruction emphasizes the process particular to design and technology activities: namely, the design processes which involve solving practical problems within contexts that have meaning and relevance to pupils and according to their abilities and experiences (see Makiya & Rogers 1992). According to Makiya and Rogers (1992, 2) design and technology activity is seen as the process of satisfying needs by solving practical problems that involve pupils in working with a variety of materials. They also include concepts such as mechanical motion, electricity, energy, and control in design and technology. Technology education prepares pupils to be knowledgeable about technology - its evolution, systems, technologies, utilization and social, economical, natural, and cultural significance.

Children's own interest is the starting-point of all work

If we teach something about electricity, power or mechanical movements in the early years, do we start to tell about technology to children? Hardly, because they wouldn't understand and our teaching could have a disturbing effect on the daily routine. If some child comes to kindergarten in the morning and starts to tell immediately about his father's new mobile phone, we have a good opportunity to discuss why a mobile phone has an antenna, for example. Technology education needs real links to a child's life.

Now, when children have become oriented toward some technological product, we can try to transform this situation into a learning situation. Sloyd gives very good possibilities to extend the daily interesting topics into learning tasks. Because most children probably have experience with sloyd, they could make their father's mobile phone by themselves.

Sloyd is not a new thing in early childhood education, but traditional sloyd has been regarded more as bustling activity than as systematic learning. In many cases it has not been considered a form of learning at all. This opinion has been expressed especially with regard to woodwork. In many cases sloyd is regarded as purposeless activity because it has appeared to be nothing but nailing and hammering. Actually this is not a bad situation, but by means of some little change sloyd can be connected to learning tasks. The connection could, for example, be one between planning and the natural environment, just like green design. In this way we can get a prospect of lasting development for sloyd. The link could also be between sloyd and mathematic, information technology like father's mobile phone, transportation or power. Sloyd is seen as a good method for technology education. In this article possibilities are sought by which to integrate technology into sloyd with practical examples.

Sloyd and technology have not been the subject of much research in connection with childhood education. Browne (1991), Browne & Ross (1991), Makiya & Rogers (1992), Richards (1990), Ross & Browne (1993) and Stable (1995) have published some literature on early childhood education close to sloyd or technology education. This literature helps a lot in developing the practices of early childhood education in this versatile field.

Sloyd as a method of technological education

Johansson (1994), Lindfors (1992) and Peltonen (1995) have considered that the core of sloyd lies in productive operation. The process starts with an idea and ends in a product, passing through the designing and making phases. It is assumed that during the process a continued development of the cognitive, affective, and psychomotor faculties will take place. This process is more useful for a child's learning if the productive operation is implemented as an entire process. The beginning of this operation is the most important part, not only as regards the transfer of learning.

There is a great potential in education for using sloyd to help learners to develop their cognitive, affective, and psychomotor faculties. This potential takes the form of learning by doing, which has been mentioned as a teaching method by many distinguished researchers of education. Nowadays, when talking about learning by doing, Dewey is most often invoked. Learning by doing is an essential part of the constructive concept of learning.

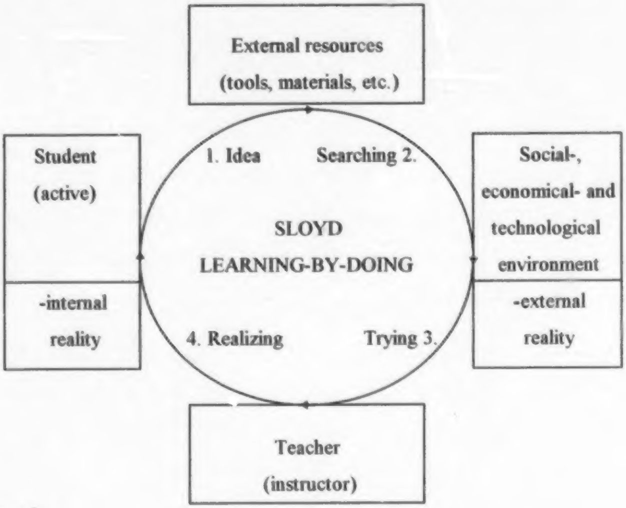
External resources
(tools, materials, etc.)
Student
(active)
-internal
reality
1. Idea
Searching 2.
SLOYD
LEARNING-BY-DOING
4. Realizing
Trying 3.
Social-,
economical- and
technological
environment
-external
reality
Teacher
(instructor)

Figure 1.

A didactic model using sloyd as a learning method.

In sloyd and the integration of technology to sloyd as in the practice of constructive learning, children should mould their learning environment themselves, an environment where the self-made product is connected to real life. With the help of the product it is possible to become familiar with the environment and to learn about the surrounding economical, technological, and social culture and their importance for the individual and the whole of society. This sets demand on sloyd as a learning process. If we don't review sloyd as merely an artistic and aesthetic process, sloyd connects better to the children's environment. As Figure 1 shows, doing should be in connection with children's environment and external reality.

Internal reality, children's thoughts and memories, can be in interaction with external reality with the help of learning-by-doing. In this article sloyd is reviewed as a learning measure. The interaction of external and internal reality enhances children's internal reality. This event is called learning. One method for this learning process is none other than sloyd.

As a good teaching and learning situation presupposes, in this model there is teacher who is the instructor of learning. There we find also external resources such as tools, materials, and workspace. The object of teaching and learning is the student, who should be the active learner in this process. The core of this model is learning-by-doing, in this case the sloyd process. The sloyd process should evolve like the creative problem solving process, which begins from an idea and ends in a product via searching, trying, and realizing.

Integrating technology into sloyd in practice

How can we integrate technology education into sloyd? The sloyd process should begins with the children's ideas, but the teacher can also suggest a topic to the children. The curriculum of early childhood education is based on integrated curriculum. Let's look at these integrate possibilities by using a clock as an example. This example is based on an ideabook named

Hickory Dickory Dock published by CollinsEducational (1990). A clock is connected with children's lives and it also directs their life a very lot. A clock is a familiar thing to children, although they usually cannot understand the concept of time.

We can start working to become familiar with the concept of a clock by singing, talking, playing, or reading stories about a clock. Children can bring different clocks from home to kindergarden in order to become familiar with them. Thus we can collect different clocks and discuss, for example, what makes some clocks different or similar, why were clocks invented, or how many ways can clocks tell you the time?

When we have received a sufficient orientation level to our theme, we can start to plan the production of our own clock. This is the sloyd process in this whole educational teaching and learning situation. After the clock songs and stories and getting to know the clock and it's function we can invent our own clock. As was mentioned a while ago, the sloyd process should be based on creative problem solving. The most important thing is that children think carefully about what they will do, or can they actually plan their own clock? At the beginning of this phase teacher could start discussion asking, "Would you like to invent a clock?"

First of all children think about the problem, because inventors also work like this. We have to think about who needs the clock? What will our clock look like and how will it tell us the time? We can also think about what kind of clock we want to make. It is very useful to draw a picture of the clock we want to make. This way we can illustrate our ideas and planning. After we have invented our own clock and we know what it will look like, we have to make a work plan. We should think about what to do first. Do we need to glue something together? What are we going to use for the clock face, and so on. After our clock is done, we get more thinking in our sloyd process by asking if the children think they could improve on the clock. Asking if a student's self-made clock looks like the plan is also a very important question for self-evaluation.

When everybody has done their own clock, we can again look at our real clocks. Like in the constructive concept of learning, children have built their learning environment by themselves, an environments where the self-made product is connected to real life. In this case it is their self-made clock. With the help of the self-made clock it is possible to observe the environment and to learn about economical, technological, and social culture and their importance for the individual and all of society. An economic context arises, for instance, when we are playing shop, in which we buy or sell our self-made clocks.

When we were making our clocks, we had to think of many kinds of things in advance. But did anybody think what makes real clocks tick? We will find two main types of clocks, when we examine real ones; battery clocks and mechanical clocks. Batteries provide some clocks electricity to make them work. We can ask children to find out about batteries. We can also ask if they can see the wheels inside of mechanical clocks. They are called cogs. Cogs are used in many machines. We can ask if children know of any and can they figure out how they work.

Look at the oldest and the newest clocks. What are the differences and the similarities? Long before clocks were invented, people used to use the sun as a clock. We can make clear the working of a sun-dial by tracing a friend's shadow on the playground at different times of the day. In the afternoon we can think about why they are different. We can also make our own sun-dial by ourselves and we get a new sloyd topic in this way again. At the same time we learn something about the natural environment, such where as the sun is in the morning and where it sets in the evening.

The clock was only one example of the integrated sloyd process. We can learn about electricity, mechanics or phenomena using these same phases of teaching. We can make for example a lighthouse where we need to get light on the top of our wooden structure. In many cases electricity is understood to be a very dangerous topic. If we work with a battery, wire and lamp, however, like a flashlight has, we are dealing with a very low electrical current, which is not dangerous in any case. Actually this topic gives a very good possibility to tell about the dangers of electricity which is in the children's home. It is quite another matter and it makes most home appliances work. Electrically operated home appliances are plugged in and we have to caution children against wall sockets.

Discussion

Technology is not a problem to children, but it is problem to adults. Children live in a technological world, and they have always done so. Their toys and Christmas presents are very technological things. They don't usually have any defensive reaction against computers, electronical games or toys. Most interestingly many everyday findings confirm that boys and girls are equal in this kind of activity in the early years, especially with the computer.

When we are teaching the afore mentioned things in early childhood education, we should observe children's ability to think at an abstract level. Their abstract thinking depends a lot upon their interests. A boy who is very interested in cars and a girl who is very interested in horses can achieve a higher level of thinking than other children. Most of their action is focused on their interest area.

In early childhood education children should have possiblities to become familiar with the technological world. This demand is fulfilled in many cases, but there is still a developmental need in this field. This sets opportunity to the professional development of early childhood educators. Early childhood educators don't always recognize that they are teaching technology. Technology is not as magic a thing as they might suppose. In this article, possiblities of integrating technology into sloyd have been reviewed quite superficially. It is diffucult to draw the line between these different subjects, because according to definitions of technology, wood-, metal-, or textile-involved sloyd is only one way to make technological products. However, it it very profitable to review how we can teach different areas of technology in connection with sloyd.

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The Development of Craft Teaching in the Education of Class Teachers

Abstract

Teachers have always been required to possess a wide range of knowledge in different subjects and a large repertoire of professional skills. An effective teacher should also possess knowledge and understanding of the content of the subjects and topics being taught as well as the ability to manage a class, explain clearly, ask intelligent and appropriate questions and monitor and assess learning. (Wragg 1996)

The professional teaching of craft in Finnish schools has to continue, since craft is unique as a school subject. What makes it unique is the fact that only in Finland it includes both textile and technical crafts. Pupils become familiar with different craft techniques and materials. Very often nowadays they also participate in the planning of the teaching itself, which increases their interest in teaching as well as their responsibility for their learning. (Suojanen 1993)

In Finnish schools it is usually the individual teacher who is responsible both for planning the goals and the content of the teaching and for the

actual teaching. However, the teacher's own experience and everyday thinking are no more sufficient for the many-sided and ever-developing tasks at school. Thus, the main aim of the academic education of teachers is to create a scientific attitude towards teaching, i.e. to combine theory and practice. (Suojanen 1993)

Employing outside experts without any pedagogical training as teachers in schools has recently been under discussion (TV news, 3rd April, 1996, and the Länsi-Suomi, 4th and 9th April, 1996). Also this matter has to be taken into consideration when teacher education and teaching competence are going discussed.

The ultimate purpose of craft education is to enable the individual to develop by means of his or her own qualifications as well as to help him or her create a relation between internal and eternal reality by means of making things. (Heikkilä 1987)

According to Kojonkoski-Rännäli (1995), craft is an integrated process, which means that the same individual is involved in all the different phases of production: the creation, the planning of its artistic and technical qualities and the making and the evaluation of the product. The importance of craft in the development of the individual can best be seen in the wholeness of the integrated process. At the beginning of this development, however, it is also necessary for the individual to be able to practise different techniques as such without the planning phase. Practice is necessary for all development of the skill and the making.

The new curriculum for class teacher training in Rauma includes 4 1/2 study weeks of basic studies of craft. During this period the students study both textile and technical crafts giving priority to the alternative of their choice. The basic studies can be completed either during the first or during the second academic year. After that, the students can choose studies of 15-20 more study weeks in textile work or 15-35 study weeks in technical crafts.

The aim of the craft studies for class teachers in Rauma is to train them in the materials used at the junior stage. In addition, the training aims at teaching them the basic concepts and working methods used in textile and technical crafts as well as at instructing them to use the equipment safely and in an appropriate way. The students also have to learn how to plan, produce and evaluate the tasks suitable for the junior stage. Even traditional craft and consumer education are included in the studies. The students should be able to get information about craft and have proficiency in how to work out a craft curriculum for the individual school based on the national curriculum. (Turun yliopisto, Kasvatustieteiden tiedekunta, opinto-opas 1995-96)

The student groups are very heterogeneous as to their skills and know-how in craft. Many of them. have not worked with craft techniques for 5-10 years. Others may have studied craft for a year or more at a vocational school or at a college for crafts and design. Some students have to start from the beginning, e.g. how to use the equipment right. After controlling the equipment they can start getting acquainted with the techniques. Others are already familiar with the techniques but unfamiliar with the didactics,

i.e. they do not know how to teach them to the children or how to plan their teaching.

The aim is to include both craft didactics and craft mastery in the basic studies in order that the students might become familiar with the teaching of craft at the junior stage. However, teaching craft is hard if one does not have good mastery in it. Often it takes a long time for the student to develop his or her skills and to become acquainted with craft. In such cases the studies as a whole may remain very superficial.

The paper is based on the Licenciate study I am working on called *The assessment of the Realisation of the Curriculum of the Basic Studies in Craft at the Department of Teacher Training in Rauma.* In my introduction I present my research plan and one part of the measuring instrument of the initial test.

Keywords: Craft, teacher education, curriculum, textile craft, technical craft.

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The Development of Craft Teaching in the Education of Class Teachers

The Evaluation of the Realization of the Curriculum for the Basic Studies in Craft at the Department of Teacher Training in Rauma

The Basis of the Study

The study deals with the present curriculum (since 1996) for the basic studies in craft at the Department of Teacher Training in Rauma. Both textile and technical crafts are included in the curriculum.

The new curriculum for class teacher training in Rauma includes 41/2 study weeks of basic studies in craft. During this period the students are given instruction in both textile and technical crafts. After that, they can choose between additional studies of 15-20 study weeks in textile or 15-35 study weeks in technical crafts. The students can complete their basic studies in craft either during the first or during the second academic year. Their practice period in the subjects included in their basic studies takes place in the begin (January/February) of the spring term of the same academic year. It means that they have only been able to complete half of their craft studies by that time.

In the years 1993-1996 the students have answered different feedback questionnaires on their studies in craft, especially in textile crafts. It was mostly the textile crafts teachers that wanted to get feedback on their courses, but the students also gave feedback on their studies in technical crafts. They did not make difference between textile and technical craft in their answers, but they gave feedback on craft. Owing to this feedback, changes have been made in the contents of the different study periods in craft every year. However, since every year involves a different group of students with different qualifications and experience in craft, the changes have not necessarily contributed to the realization of the curriculum.

The study has a practical basis. It aims at getting both relevant and useful practical information about the realization of the craft curriculum at the Department of Teacher Training in Rauma.

The Theoretical Background

The key elements of the study comprise the essential nature of craft and the teaching of craft, craft as a school subject, craft curriculum and its evaluation.

The Essential Nature of Craft

It is not until quite recently that craft and craft education have begun to interest researchers. However, there are several Finnish researchers who have been studying the problems in this field. Theory of craft and that of craft education have been elaborated by Pirkko Anttila (1988, 1993), Jorma Heikkilä (1987), Tapani Kananoja (1989), Seija Kojonkoski-Rännäli (1995), Linnea Lindfors (1991), Eva Malmberg (1995), Juhani Peltonen (1988) and Ulla Suojanen (1993). All these researchers have given their individual definitions of craft.

According to Kojonkoski-Rännäli (1995) and Peltonen (1988) one of the characteristics of craft is that it is conceived to be an integrated process, where the same individual both plans a product, makes it an assesses the final product. This characteristic may be regarded as the basis for craft as a school subject. Anttila (1988) has discussed the essential nature of craft from different - e.g. social, personal, economical and pedagogical - points of view. In the recent study of craft (Kojonkoski-Rännäli 1995) the importance of craft lies in the fact that it is a means for developing and also for educating the individual. Therefore, one can draw the conclusion that the teaching of craft has to form an integral part of basic education and, consequently, an equally integral part of teacher education.

The Purpose of the Nature

The aim to study the students' experiences as to the realization of the craft curriculum within their training programme. In order to carry out the project, the following primary and secondary problems will be answered.

The Problems

1) To what extent are the aims of craft studies achieved during the training?

2)What kind of changes are there in the individual student's ideas about craft and the teaching of craft?

3)To what extent is the curriculum realized as far as individual students are concerned?

The Test Subjects

The basic test subject group consists of 128 first and second year students within the class teacher training programme at the Rauma department. Target group A (in the academic year 1996-97) consists of students taking the whole of the 4 1/2-study week basic studies with priority on either textile or technical crafts. Target group B consists of a similar group of students in the academic year 1997-98. This means that the exact number of the test subjects can only be given as the study is progressing.

The Measurements

The measuring instruments were drawn up in spring and summer 1996. The initial measurements were made at the beginning of the autumn term 1996. To validate the questionnaire, a pilot test was made in August 1996. The test subject group consisted of about 150 students participating in the entrance examination for nursery school teacher training within the Department of Teacher Training in Rauma. The questionnaires were answered and returned by 60 participants. No changes were made in the questionnaire after the pilot test.

The Items in the Measuring Instrument for the First Measurement

1) Background information
2) The student's opinion about craft-related hobbies
3) The student's own definition of craft and making things by hand
4) Factors related to craft teaching at school
5) Concepts, terms, working techniques and stages related to textile crafts
6) Concepts, terms, working techniques and stages related to technical crafts

Timetable for target group A measurements:

Measurement	Course in craft	Time	Teaching practice
Initial measurement	prior to course 1	September -96	-
First evaluation measurement	after completed courses 1-2	November-December -96	-
Second evaluation measurement	after course 3	May -97	after the first practice period

Timetable for target group B measurements:

Measurement	Course in craft	Time	Teaching practice
Initial measurement	prior to course 1	September -97	-
First evaluation measurement	after completed courses 1-2	November-December -97	-
Second evaluation measurement	after course 3	May -98	after the first practice period

The Students' Ideas about Craft and Making Things by Hand

One of the items (no. 3) in the measuring instrument for the first measurement will be presented below. This item will provide for a basis of comparison between the students' views of craft and making things by hand. The same items will be used in the second and third measurement after the students have completed the three courses of craft (the 4 1/2-study week basic studies) and their first practice period. The item deals with the problems no. 2.

Item no. 3

A lot of different issues can be related to craft. It can also be defined in many different ways. Your task is to assess the extent to which you think the statements below fit YOUR own definition of craft and making things by hand. Mark the most suitable alternative in each statement with a circle.

Rating scale:
1 very well
2 reasonably well
3 to some extent
4 not very well
5 not at all

1. Craft is about working different materials. 1 2 3 4 5
2. Craft is about using different techniques and tools. 1 2 3 4 5
3. Craft is a school subject. 1 2 3 4 5
4. Craft aims at developing the individual as whole. 1 2 3 4 5
5. Craft keeps up traditions and hands them down from generation to generation. 1 2 3 4 5
6. For making things by hand one needs pre-written instructions and ready-made models. 1 2 3 4 5
7. Craft develops manual skills. 1 2 3 4 5
8. Not everybody learns how to make things by hand. 1 2 3 4 5
9. Craft includes the planning and making of the thing 1 2 3 4 5

as well as the evaluation of the final product.
10. Craft is a nice way of passing the time. 1 2 3 4 5
11. The main thing in making something by hand is the result. 1 2 3 4 5
12. No machines are used in handicraft. 1 2 3 4 5
13. Craft is easy if one understands the instructions or if somebody shows one how to make things. 1 2 3 4 5
14. Handicraft is a hand-made product. 1 2 3 4 5
15. Craft develops economical thinking. 1 2 3 4 5
16. All work made by hand is craft. 1 2 3 4 5
17. When making things by hand, one does not have to think. 1 2 3 4 5
18. Problem-solving skills are needed in craft. 1 2 3 4 5
19. One who makes a thing by hand also plans the process of making it. 1 2 3 4 5
20. In the final piece of work one can see the hand of the maker. 1 2 3 4 5

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Råmaterialets betydelse i den framtida slöjden

Abtsract

Hårdslöjdskonsulenterna i Sverige arbetar med slöjden ute på fältet och ser utvecklingen inom slöjdnäringen på nära håll.

Idag kan man se att kunskapen om och tillgången på bra slöjdmaterial kraftigt går tillbaka varför insatser är nödvändiga. Kunskaperna och färdigheterna inom slöjden traderades tidigare från generation till generation och denna kunskapsöverföring förekommer endast sällsynt idag. Många tekniker och kunskaper inom materialhantering bygger på generationers erfarenhet och finns inte dokumenterade. Ofta är dokumentation i text och bild svårt p g a färdigheternas ibland märkliga karaktär. Hur skall man kunna dokumentera subjektiva talanger som 'blick', 'ögonmått' och känsla, kanske är det enda sättet att öva upp sina sinnen och därigenom föra kunskapen vidare. En del slöjdprocesser inom materialområdet kan p g a tidsdimensionen vara omöjliga att lära ut på en kurs eller utbildning, de kan förutsätta livslångt lärande. Hårdslöjdskonsulenterna har lanserat projekt "RåMa" som skall försöka belysa materialfrågan.

Sökord: RåMa, material, hemslöjd, hårdslöjd.

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Råmaterialets betydelse i den framtida slöjden

Råma

I det följande redogörs för ett projekt initierat av arbetsgruppen råmaterial bestående av hemslöjdskonsulenter från olika delar av Sverige. Ambitionen är att undersöka och utveckla materialkunskapen och hanteringen av naturmaterial inom slöjden. En viktig del är naturligtvis att se var vi står, göra en noggrannare kartläggning av området samt att testa uppgiftslämnares validitet på ett vetenskapligt sätt.

Projekt råmaterial initierades av Sveriges hårdslöjdskonsulenter 1994 och har till syfte att bedriva och uppmuntra forskning och utveckling om naturliga råmaterial till slöjd främst inom de hårda materialområdena. Arbetsgruppen samarbetar med arbetsgruppen för verktyg och redskap samt deltog i en riksomfattande manifestation för täljning (Sverige Täljer) som gick av stapeln 1996. Råvaror till slöjden är ett av de områden som Nämnden för hemslöjdsfrågor anger som prioriterat område i sin fördjupade anslagsframställan.

I arbetsgruppen ingår hemslöjdskonsulenter från hela landet:

Thomas Lööf, Kronobergs län
Torbjörn Lindström, Värmlands län

Tore Edvinson, Uppsala län
Lars Pettersson, Örebro län
Bengt Jonsson, Dalarnas län
Eva Nordangård, Västernorrlands län
Kjell Berlin, Norrbottens län
Stig-Harry Johansson, sameslöjdskonsulent från sydsamiska området

Ola Lind (1996) som arbetat med ett uppdrag inom projektet fick följande reflektion efter en djupdykning i materialhanteringsfrågorna.

> *"De senaste 20-30 åren har människan förstört mer på jorden än under hela hennes tid på planeten. Har människan alltid haft samma hänsynslösa syn på naturen, och är det i så fall bara de tekniska möjligheterna om skiljer oss från våra förfäder, eller avspeglar teknik och förhållningssätt varandra?"*. (Ola Lind 1996)

När man parallellt studerar folktro och tekniskt kunnande hos äldre kulturer genomsyras de ofta av en syn på naturen som är respektfull inför dess urkrafter och ödmjuk inför det ömsesidiga beroendet. Detta kan sedan också avspegla sig i formen hos gamla bruksföremål som i ett slags kärlekens kilskrift kan trollbinda oss med all sin enkelhet. Frågan är kanske inte hur föremålen ser ut i färdigt skick utan med vilken blick och kunskap man söker sitt råmaterial i naturen. Blicken som gör att man t e x ur en björk kan få allt från medicin, redskap, te, drycker, skor, instrument, möbler, lim e t c, men bara om man vet när, var och hur det skall behandlas, växa, fällas, torkas, förvaras och om man kan läsa trädets formspråk. Kunskap om naturen kan göra att man får ett annorlunda tidsperspektiv än det idag gängse. Man kan följa varje träds uppväxtsätt och mognad och välja ut allt med sådan omsorg att man får den bästa kvalitén. Ibland måste man t o m förbereda sådant som bara ens barnbarn kan skörda. Kunskaperna om material inom bruksslöjden har länge varit stor. Att behärska hela tillverkningsprocessen från odlingen och inhämtandet av materialet i naturen till färdigställandet av en färdig produkt är ett av hemslöjdens adelsmärken. När ett gott material, bra redskap och god teknik möts finns förutsättningar för ett fullgott resultat. I bondesamhället traderades kunskaper vidare från generation till generation. Det var självklara kunskaper som vävdes in i det dagliga livet och de var en förutsättning för överlevnad. Under industrialiseringen och den därpå följande urbaniseringen av landet förlorades mycket av denna kunskap och nu återstår endast ett fåtal traditionsbärare. Det har tidigare gjorts en del dokumentation (t e x Nordiska Museet) för att bevara kunskaper åt eftervärlden och det är än idag viktigt att fånga upp och sprida den lärdom våra sista traditionsbärare har om våra viktigaste naturresurser. När vi fått insikt om vidden av dessa kunskaper kan vi ge träanvändandet och naturresurserna ytterligare dimensioner.

Syftet med projektet är:

1) Dokumentera och forska i de grundläggande kunskaperna man hade i det förindustriella bondesamhället om ämnesförberedande åtgärder, om hur man valde virke och när man tog material m.m. Materialhantering bör ses som en egen form av teknik bland övriga och är en av de tekniker som är mest hotade att falla i glömska.

2) Skapa ett pedagogiskt material som kan användas vid utbildning, information och utställningar.

3) Skapa materialreservat för att genomföra experiment och skapa underlag för framtida forskning och utbildning om ämneshantering och ämnesförberedande åtgärder.

4) Att kunna förse skolor med ämnesvirke av god kvalitet utan att helheten från växande träd till färdig produkt bryts. Förbättra samarbetet och skapa ett kontaktnät mellan å ena sidan skogsägare, skogsorganisationer, myndigheter och å andra sidan slöjdare, träanvändare, föreningar och skolor.

Dokumentation

- Insamlande av information genom intervjuer och enkäter kräver tydliga mallar och frågelistor för att informationen skall kunna användas och bearbetas på ett bra sätt. Frågelistor och intervjuunderlag bör finnas hos alla hemslöjdskonsulenter i landet.
- Söka efter befintligt material på bibliotek, museer, litteratur och högskolor.

Pedagogiskt material

- Sammanställa ett pedagogiskt material som belyser egenskaper hos olika träslag och växtsätt och dessas användningssätt.
- Producera en utställning om virke och ämnen för visning i samband med manifestationen 1996.

- Anordna seminarier för att belysa vikten av materialkunskaper och skapa kontakter mellan skogsintressenter, slöjdintresserade, forskare och träanvändare.
- Sammanställa ett instruktivt material om hur man tar, torkar, lagrar och förbereder ämnen utan att skada virket.
- Stimulera användandet av otorkat färskt slöjdmaterial i skolslöjden.

Materialreservat

- Upprätta områden där man tydligt kan visa på växande material. En ämnesvandring i skogarna runt Sätergläntan Hemslöjdens Gård (Dalarna) till täljstämman i augusti 1996.
- Skapa materialreservat i olika regioner i landet efter dessas klimatologiska förhållanden och göra dessa tillgängliga för utbildningar, skolor och allmänhet. De olika reservaten får regional prägel.

Kontaktnät

- Skapa kontaktnät och samordna alla de ovan nämnda delarna. Idén har presenterats för personer verksamma inom bl a näringslivet, FoU, museer, skolor, högskolor och hemslöjdsområdet, dessa har visat stort intresse och flera har låtit förstå att de aktivt vill medverka.

Projektet beräknas pågå i många år. Varje verksamhetsår får olika prioriteringar men delar av projektet är av sådan karaktär att de måste pågå i flera år.

År 1

- Upprättande av frågelistor och intervjuunderlag för insamlandet av information från kunskapsbärare.
- Kartlägga befintligt material som finns bevarat och dokumenterat på museer, bibliotek, högskolor, hembygdsarkiv m.m.
- Påbörja sammanställning av ett pedagogiskt material om träslag och deras olika användningsområden.
- I samarbete med Sätergläntans kursgård upprätta ett område där växande material åskådliggörs på ett tydligt sätt.
- Samordna produktionen av en utställning om trä som material till olika föremål.
- Anordna seminarier för att belysa vikten av materialkännedomen och materialteknikens användbarhet idag och sprida dessa kunskaper.

År 2

- Sammanställa det material som framkommit genom intervjuer och frågelistor och göra detta material lättillgängligt.
- Arbeta vidare med sammanställning av ett pedagogiskt material om olika träslag och växtsätt som material i föremål.
- Samordna produktion av ett pedagogiskt bildmaterial om trädens breda användbarhet. Detta utformas så att det kan användas av hemslöjdskonsulenter, skolor, skogsintressenter m.m.
- Initiera avsättandet av områden till materialreservat runt om i landet och tillsammans med olika intressenter upprätta skötselplaner för dessa.

År 3

- Presentera resultatet av inventeringar, frågelistor och intervjuer och göra det användbart för skolor, konsulenter, skogsfolk m.m.
- Använda det framkomna materialet för att stimulera användandet av rått virke i grundskolan.
- Följa upp utvecklandet av materialreservat samt hjälpa till med utbildning av personal för skötseln av dessa för att garantera kommande generationer kunskaper om vårt teknik- och kulturarv.

I januari 1996 beslöt arbetsgruppen att begränsa projektet för att tillsvidare arbeta med ett material som nare kan ligga till grund för vidare information och marknadsföring av arbetet och hitta samarbetspartners som är villiga att satsa pengar och arbete i detta projekt. Från april 1996 anställdes två personer på halvtid under sex månader för att arbeta med bl a en utställning.

Att påbörja ett permanent materialreservat för att skapa erfarenheter för efterföljare runt om i landet kändes inte relevant av flera skäl. Kontinuiteten som krävs runt skötseln av ett materialreservat bygger på långsiktiga avtal med markägare och personer som åtar sig att förvalta området och dess olika installationer. Ett sådant avtal skulle vara svårt att teckna med tanke på att man måste leta upp ett lämplig plats efter ett stort antal okända kriterier. Vad som skulle påverkas via olika ingrepp på den växande skogen och hur detta skall gå till vet man först efter det tänkta etnologiska arbetet där traditionella kunskaper skall samlas in. En mobil utställningen om råmaterial i olika former, dess egenskaper och användningsområden blev prioriterat. Genom att visa upp var vi kunskapsmässigt står idag för olika grupper och ta del av deras kritik, tillägg eller ytterligare frågeställningar skulle vi kunna ringa in de områden som i det fortsatta arbetet är viktigast att fördjupa sig i. Utställningen består av åtta stationer utspriddalängs en stig med koppling till växande träd där så är möjligt (övervallningar, ungskog o s v). Överst på skärmen är en enkel fråga utskuren i ett trästycke, tanken är att man med hjälp av det övriga materialet på skärmen skall kunna besvara frågan. Utställningen turnerar för tillfället i Sverige.

Projektet har skapat nya kontakter och materialreservat har börjat ta form i landet. Vi arbetar vidare och hoppas att vi genom detta forum kan få nya kontakter och samarbetsmöjligheter samt gärna konstruktiv kritik.

Källor

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The *TECHNE SERIES* has been initiated to enable studies in Sloyd (or crafts) Education and Crafts Science to be published. The series comprises Series A, which includes Research Reports in English or some other world language, and Series B, which includes Proceedings, e.g. research surveys and contributions to discussions and to conferences, in some Nordic language or in English.

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SLOYD is used as an umbrella term for different educational crafts whose scientific basis is to be found in Sloyd (or crafts) Education and Crafts Science.

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